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1996 Survey of Care Homes for Elderly People. Final report

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The **PERSONAL SOCIAL SERVICES RESEARCH UNIT** undertakes social and health care research, supported mainly by the United Kingdom Department of Health, and focusing particularly on policy research and analysis of equity and efficiency in community care, long-term care and related areas — including services for elderly people, people with mental health problems and children in care. The PSSRU was established at the University of Kent at Canterbury in 1974, and from 1996 it has operated from three sites:

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1996 Survey of Care Homes for Elderly People: Final Report

Summary

1. Since the introduction of the community care reforms in April 1993, local authorities have had the responsibility for assessing all non-NHS publicly-funded admissions to residential and nursing home care. This survey formed part of a three-part study funded by the Department of Health, which was designed to examine a wide range of issues associated with the current patterns of use of residential and nursing home care for elderly people following this legislation, including contributing to the Revenue Support Grant (RSG) allocation formulae, the method of distributing central grant to local authorities. The three surveys were:

- a national survey of elderly people admitted as supported residents;
- a longitudinal survey tracking the health and destination of the admissions sample; and
- a national survey of residential and nursing homes.

Chapter 1

2. The principal aims were to provide a baseline description of the current population of homes, and to explore the relationship between the costs or price of care and the dependency characteristics of residents.
3. The survey took place in the autumn of 1996. 673 homes (82 per cent of those approached) in 21 local authorities participated. 618 homes (75 per cent of those approached) provided information both about the home and about the characteristics of individual residents. Within the homes, information was collected about a sample of residents, accounting for 11,900 residents from a total population of 20,200. The sample of homes was designed to ensure a large enough number of homes for separate analyses for each of the four major types of home: local authority, private and voluntary residential homes, and nursing homes.

Chapter 2

4. All statistics on residents have been weighted to reflect the national distribution between homes. Nearly 70 per cent of all residents were long-stay and publicly funded. Only one-third of residents in independent residential care, and one-quarter in nursing homes, were wholly privately funded.

5. The number of residents who were admitted as privately funded and had subsequently become publicly funded during the previous year was small. Fourteen per cent of publicly-funded residents who were 65 or over at the time of the survey had been admitted as privately-funded residents.
6. About 3 per cent of residents at any time are short-stay. Two-thirds of these residents were local authority funded and two-thirds were located in local authority run homes. The majority of short-term residents were, or planned to be, regular users of the service.
7. Levels of dependency and cognitive impairment among residents have risen since the last comparable survey a decade previously, most noticeably in voluntary homes and nursing homes. Formerly there was little difference between people who were privately funded and those supported by public funds in independent homes. In 1996, publicly-funded residents were, on average, a little more dependent than privately-funded residents, mainly because of a small group of low dependency private residents. The difference is more noticeable among short-stay residents.
8. There has been a shift to admitting more people directly from hospital. There remains a small (2 per cent nationally) but dependent group of residents who continue to be funded by the NHS, placed both in residential and nursing homes.
9. Length of stay has stayed much the same. The increase for residents in private homes is probably because many homes had only been recently established in the mid 1980s. The mean length of stay of existing long stay residents was 40 months in a residential home, 30 months in a nursing home, but with a wide spread. The most usual period for a short stay was 14 days.
10. There still appear to be a significant proportion of long-stay elderly people in homes who have quite low levels of dependency, comparable with many who are cared for in the community. Possibly they have recovered following admission, but, as evidence from the longitudinal survey shows, there is little possibility of rehabilitation. These are often older people who were previously living alone. Those who are privately funded may have lacked access to expert advice and services which would have helped them remain in their own home.

Chapter 3

11. Local authority homes have been falling in size and usually have 30-50 places (the mean

was 35), while private residential homes increased slightly in size, the range being typically 15-19 places. Voluntary homes and nursing homes covered a wider range of sizes.

12. Ownership of private residential homes remained concentrated among small organisations, whereas increased proportions of dual registered and nursing homes were being run by larger organisations. Over 70 per cent had been run by the present owners for more than five years. Occupancy rates were high, but have been falling in the independent sector to about 83-87 per cent.
13. The use of purpose-built homes has increased, possibly as a consequence of the growth of larger organisations running dual registered and nursing homes. The provision of single bedrooms in homes has improved significantly over the last ten years, though is still lower in private homes and in nursing homes. However, en suite showers or baths and en suite toilets were much less prevalent in local authority homes.
14. Group living arrangements were much more prevalent in local authority homes than in the independent sector, even though dual registered and nursing homes were larger, on average, than local authority homes.
15. Local authority homes were much more likely to provide services to non-residents than independent sector homes. Day care was the main service provided to non-residents, with bathing services being the next most frequently reported.
16. About half of all residential homes had a trained nurse among the staff. This was more common in private residential homes.
17. There were significant differences in the social climates of independent residential and nursing homes, and between local authority homes and independent residential homes. Local authority homes had significantly lower reported levels of Cohesion, Independence, Organization and Physical Comfort, and higher levels of Resident Influence and Conflict than other residential homes. Private residential homes had significantly higher levels of Cohesion, Independence, Organization and Physical Comfort than all other types of home. Nursing homes had significantly lower levels of Independence, Resident Influence, and Self-disclosure than independent residential homes.

Chapter 4

18. The survey reports prices for residents in independent homes and unit costs in local authority homes. Prices are determined by the interplay of demand and supply and the study teases out the determinants of pricing. Nursing homes' prices include care which is provided by community nursing services for residential homes and operate under different regulatory regimes. On average community nursing only added £5 per week per resident to the cost of residential care.
19. The most important element of the cost of care is the cost of staff. The basic wage (i.e. as paid to unqualified, inexperienced care staff) was slightly higher in residential care homes than in nursing home. The majority of nursing homes and private residential homes paid basic wages below £4 per hour (89 per cent and 92 per cent respectively). By contrast, a very high proportion of local authority homes had a basic wage between £4 and £5 per hour.
20. The analysis of costs and prices in the independent sector found:
 - Relatively modest mark-up rates of price over cost at around 10 per cent.
 - A significant relationship between price and Barthel as a measure of dependency, but the effects were very small and non-linear.
 - Larger effects of dependency on cost, which may be due to price setting behaviour of local authorities.
 - A large dislocation between nursing and residential care prices dominated the relationship between dependency and both prices and costs.
 - Voluntary sector residential prices were more sensitive to dependency variations and lower.
 - Prices were very sensitive to variations in labour costs (local market wage rate).
 - Competition lowered prices, but the market already appeared to be pretty competitive.
 - Privately-financed residents were charged more for a similar service.
 - Local authority pricing policies do have significant effects. The data suggest fixed prices being high in nursing care and low in residential care, although other factors are certainly relevant and the result should be treated with caution.
21. Unit costs of local authority residential care have always been higher than the price of independently provided care. The analysis of costs of local authority provision found:

- Costs were very sensitive to level of occupancy.
- Costs were minimised in 60-bedded homes.
- Where day care was included, it only had a significant impact on the estimated costs of caring for residents when more than 35 sessions per week were provided.
- The impact of short-term care on costs was observable once the proportion rose above 17 per cent (the equivalent of more than five residents in a 30-bedded home). In an average size home short-term residents cost 5 per cent more than permanent residents.
- Two indicators of social climate were found to be significantly associated with the costs of care. The more the environment fostered Independence the higher the cost, and the higher the level of Organization the lower the cost.
- The differential between unit costs in local authority homes in London and outside was far higher than in the independent sector, and remained so after allowing for resident and home characteristics.
- Adjusting for price differentials and changes in dependency accounted for most of the difference in unit costs in local authority care between 1981 and 1996. The remaining 12 per cent could in part be due the increased provision of short-term care and perhaps to unmeasured changes in dependency.

Chapter 5

22. A comparison of the circumstances of publicly-funded residents with admissions from the admissions survey found considerable similarity, though admissions tended to be a little younger, more likely to be admitted from hospital, relatively dependent, but less likely to be at the severe end of dependency. This similarity justifies one of the assumptions made in the analysis of the admissions survey for RSG purposes.

Chapter 6

23. The costs analysis, particularly of the difference between London and elsewhere, has implications with regard to the Area Cost Adjustment used by the RSG. The 1996 ACA report is reviewed, and it is argued that the ACA is probably not providing even a reasonable approximation to the equilibrium price difference between London and elsewhere, for residential and nursing care.
24. The London differential for residential care has been persistently higher than the ACA ever since the latter was introduced. This London differential is primarily due to higher labour costs, but running costs are also higher, and in the public sector staff productivity is slightly lower. This difference persists in the private market. The London differential

in charges to self-funding residents, although less than the differential in public sector unit costs, is still much greater than the ACA. If a real imbalance exists, one would expect to be seeing a rapid influx of private residential care in London.

25. Other factors are unique to this service. The private market is rapidly growing, and may well influence prices in the public sector in a way that does not happen for other local authority services. Residential and nursing care is not always provided locally, and it should not necessarily be assumed that full allowance for local price differences are essential. The implication is that a specific ACA cost formula would be desirable for the residential and nursing care element.

Chapter 7

26. Areas of current policy concern to which the survey has contributed include:

- The impact of the reforms on the use of publicly-funded residential and nursing home care.
- The distribution of central government funding for residential and nursing home care of elderly people.
- The cost implications of changes in levels of dependency.
- The use and costs of local authority provision.
- The use of homes by privately-financed residents.
- Equality of access to care.
- Bringing together the regulation of residential care and nursing homes into a single system.
- The impact of local authority purchasing policies, strategies and procedures on local markets.

27. Further work would be useful. The most obvious gap at present is an understanding of the circumstances of admission of privately-funded residents. This will be addressed by a new survey commissioned by the Department of Social Security. Other areas of interest require further analysis of the existing data. For example, linking the datasets would allow investigation into the effects of home characteristics on length of stay, mortality and changes in dependency. The survey should provide a valuable source of material when considering policy options in the field of residential and nursing home care of elderly people for some time to come.

Chapter 1

Background and Method

1.1 Introduction

There is widespread interest in the impact of the changes introduced in April 1993 in the arrangements for assessing and financing elderly people in need of residential-based care, and in the financial consequences of those changes. For example, it would be expected that, with the introduction of compulsory assessment of those entering publicly-funded long-term care in residential and nursing homes, there would be an increase in the level of dependency of residents in homes. Moreover, the changing role of the NHS in the provision of long-term care would also be expected to result in more dependent people being admitted to nursing home care, whether publicly or privately financed. Any increase in dependency could be expected to have an impact on the costs of care. Increases in costs have implications for both providers and purchasers of care.

This report presents the results of a national cross-sectional survey of residential care and nursing homes for elderly people conducted in 21 local authorities in England in the autumn of 1996. This survey was commissioned by the Department of Health as one component of a three-part study designed to investigate a range of issues associated with the current patterns of use of residential and nursing home care for elderly people. The principal aims of the cross-sectional survey were to provide a baseline description of the current population of homes and the features of the establishment they are living in, and to explore the relationship between the costs or price of care and the dependency characteristics of residents.

1.1.1 Background

The changes in the arrangements for assessing and financing elderly people in need of residential-based care were part of a wider change in the direction of policy for community care for all client groups. Although community care has been a longstanding policy objective in the United Kingdom, the major development in long-stay care during the 1980s was the growth of independent, especially private sector, provision of residential and nursing home care (Darton and Wright, 1993). This growth in provision was financed to a large extent from the social security budget, which increased from £10 million in 1979 to £1,390 million in 1990 (House of Commons Social Security Committee, 1991), and to an estimated £2.4 billion in 1992-93 (House of Commons Health Committee, 1993). The growth in residential and, more particularly, nursing home provision has also taken place alongside substantial reductions in NHS continuing-care beds (House of Commons Health Committee, 1995).

In its report on the implementation of community care in 1986, the Audit Commission stated that the fragmentation of responsibility for community services and financial disincentives, including the 'perverse incentives' encouraging residential care rather than community care, had hindered the development of community-based services. The Conservative Government appointed Sir Roy Griffiths as a special adviser to review the way in which public funds were used to support the policy of community care and to examine how the use of public funds could be improved. Sir Roy Griffiths' report recommended a more coordinated approach to the funding and management of care, with the responsibility for the allocation of funds, the assessment of need and the coordination of care being given to local authority social services departments (Griffiths, 1988). Following this, the government produced a White Paper, *Caring for People*, in 1989, which emphasised that the aim of government policy was to 'enable people to live as normal a life as possible in their own homes or in a homely environment in the local community' (Cm 849, para. 1.8). The White Paper stated that residential care and nursing homes had an important role in meeting the needs of people who required high levels of support, but that entry to residential or nursing home care should only occur after an assessment of the person's needs and circumstances. Local authorities were to be made responsible, in collaboration with health care staff, for assessing the needs of new applicants for public support for residential or nursing home care and, where appropriate, to arrange a place in a suitable home. In addition, local authorities would be expected to make maximum use of private and voluntary providers of residential and nursing home care. The new arrangements for community care were incorporated in the 1990 National Health Service and Community Care Act, and implemented on 1st April 1993.

Independent residential care and nursing homes in England and Wales are regulated by the Registered Homes Act 1984, which superseded separate Acts of Parliament covering the two types of home. Residential care homes are distinguished from nursing homes in the 1984 Act as providing board and personal care only, whereas nursing homes are intended to accommodate patients requiring constant or frequent daily nursing care. However, in practice the boundary between nursing care and personal care and attention is often unclear (DHSS, 1982). Higher average levels of disability have been found among individuals in nursing homes than among individuals in residential care homes (Ernst and Whinney, 1986; Humphreys and Kassab, 1986). However, overlaps in disability levels for individuals occur in the different types of home (Wade et al., 1983; Power, 1989; Darton and Wright, 1992). Individuals in residential care homes may have levels of disability which would be more suitably catered for in nursing homes (Cooper, 1985), while individuals in nursing homes may be sufficiently fit to be catered for in residential care homes (Primrose and Capewell, 1986; Challis and Bartlett, 1987).

In order to enable homes to provide personal and nursing care, and thus greater continuity of care for an individual with deteriorating health, the 1984 Act included a provision for the dual registration of homes as both residential and nursing homes. Local authorities manage their own residential care homes, under the National Assistance Act 1948, and are responsible for registering and inspecting private and voluntary residential care homes, while private and voluntary nursing homes are registered and inspected by health authorities. However, with the introduction of the new community care arrangements in 1993, local authorities became responsible for the assessment and financing of publicly-funded residents in both residential care and nursing homes. In 1997, the Conservative Government published a White Paper, *Social Services: Achievement and Challenge*, which suggested bringing residential and nursing homes together in a single category (Cm 3588, 1997). However, the discussion document published by the present government in September 1998 notes that there are no barriers to independent sector providers such as nursing homes offering both nursing and social long-term care (Department of Health, 1998b).

1.1.2 Aims and Objectives

As noted above, the cross-sectional survey was one component of a three-part study commissioned by the Department of Health. The Department had two principal reasons for wanting a comprehensive picture of the current role of residential care and the way it was being used by local authorities for the care of publicly-funded residents.

First, under the new arrangements for community care, local authorities bear considerable financial responsibility for elderly people in need of residential or nursing home care. A central principle underlying the Standard Spending Assessment (SSA) formulae used to allocate central government funds to local authorities is that these funds should be distributed equitably to allow for area variations in financial responsibilities that are beyond the control of local authorities. In 1995, the funding formula for residential care of elderly people was based on information which reflected the circumstances existing prior to the implementation of the 1990 Act (Department of the Environment, 1995). Thus, there was a clear need to identify the key characteristics which affect local demand for residential and nursing home care and the financial implications of this demand. Second, there was policy interest in the dependency of residents being cared for under the new arrangements and in the financial implications of current patterns of use of residential care and nursing homes.

During 1994, the Department of Health commissioned the PSSRU to produce papers reviewing the current state of knowledge about residential and nursing home care. These papers examined levels of dependency in homes, the measurement of dependency, the reasons for admission to homes and the need for further research (Darton, 1994b; Netten,

1994a; Netten et al., 1994; Warburton, 1994). Following the completion of these papers, the PSSRU was asked to prepare a proposal for a study of residential and nursing home care (Bebbington et al., 1995).

The primary purposes of the study as a whole are:

- to provide a baseline description of the use of residential and nursing home care by both publicly and privately-funded residents;
- to feed in to the development of the relevant Standard Spending Assessment formulae;
- to increase our understanding of changes over time, including mortality, changes in location and changes in dependency;
- to increase our understanding about the relationship between dependency and costs of care under the new arrangements.

The three parts of the study consist of the cross-sectional survey, a survey of 2,500 elderly people admitted to permanent residential and nursing home care with local authority financial support, and a longitudinal follow-up to the admissions survey. A description of the study is given in Bebbington et al. (1995).

The admissions survey was conducted during the autumn of 1995 for a period of three months from mid-October in 18 local authorities in England, 17 of which were included in the cross-sectional survey. The follow-ups are being conducted at six months, 18 months, 30 months and 42 months after admission. In the admissions survey, information was collected about 2,544 individuals, and included information about their household, their level of dependency and their financial circumstances. One month after admission, information was collected about mortality or the location of the elderly person. At the subsequent follow-ups, information is being collected about mortality or the location of the elderly person and, for those who are still resident in the home, information is being collected about their level of dependency. At each wave, a separate exercise is being conducted to follow up those elderly people who returned to a private household or who were discharged to hospital. For each of these cases, information is being collected about the location of the elderly person and about their level of dependency, their reasons for leaving the residential or nursing home, and their receipt of services in their new location.

1.1.3 Previous Surveys of Residential Care

The cross-sectional survey was designed to be compatible with previous surveys of residential and nursing home care conducted by the PSSRU in 1981 and 1986, and employed a similar methodology to that used in these earlier surveys. In particular, each of the surveys

was designed to collect comparable information on resident dependency, enabling comparisons to be made over time. Brief descriptions of these surveys are given in this section, and Appendix 1 contains further details.

In 1981, the PSSRU conducted a survey of local authority, voluntary and private residential homes for elderly people, in collaboration with 12 local authorities in England and Wales. All homes in the collaborating authorities were invited to participate in the survey, and completed questionnaires were obtained from 235 local authority homes, 68 voluntary homes (a response rate of 69 per cent) and 153 private homes (a response rate of 71 per cent). The respondent homes accommodated a total of 14,007 residents. In 1982 and early 1983, a follow-up survey of proprietors was conducted in one-third of the respondent private homes (Judge, 1984). The methodology of both surveys is described in Darton (1986a).

In 1986, in collaboration with the Centre for Health Economics (CHE) at the University of York, the PSSRU conducted a survey of private and voluntary registered residential and nursing homes in 17 local authority areas in England, Scotland and Wales. This survey employed a two-stage approach to the sampled homes, based on the methodology of the 1981 survey and the interview follow-up conducted in private homes. A questionnaire was posted to the home, for completion by the proprietor or manager, followed by a personal interview. The postal questionnaire collected information about the clientele and the facilities provided, information about staffing levels and individual information about the residents. The personal interview covered topics relating to the management and organisation of the home. A total of 606 homes in the sample of 855 homes responded, representing an overall response rate of 79 per cent, after excluding 85 homes found to be out of the scope of the survey. The survey included homes for elderly people and for the principal younger client groups (people with learning difficulties, mental illness or physical disabilities), although over 90 per cent of nursing homes included elderly people in their clientele. Information was collected for a total of 10,653 residents, of whom 4,974 were living in residential homes for elderly people and 1,662 were living in nursing homes. The methodology of the PSSRU/CHE survey is described in Darton et al. (1989).

Following the PSSRU/CHE survey, a similar local survey was undertaken in the Canterbury and Thanet Health Authority area in 1987 (Darton, 1989, 1990). However, in this survey an initial letter was sent to the selected homes prior to the mailing of the postal questionnaire, and the postal questionnaire was restricted to collecting information about the residents. All information relating to the home and staffing was collected in the subsequent personal interview.

The PSSRU/CHE survey and the local survey in Canterbury and Thanet only included private and voluntary homes. However, in 1988 the Social Services Inspectorate of the Department of Health undertook a study of public sector residential care in 14 local authorities, in which comparable information was collected about residents (Department of Health Social Services Inspectorate, 1989). This study included 42 local authority residential homes in the 14 local authorities, and collected information about 1,683 residents.

1.2 Design of the Survey

The cross-sectional survey was conducted in the autumn of 1996, in a sample of 822 residential and nursing homes for elderly people in 21 local authorities in England. The fieldwork was undertaken by Research Services Limited (RSL). The survey covered residential homes for elderly people managed by local authority social services departments, and registered residential homes for elderly people, registered nursing homes for elderly people and dual registered homes for elderly people run by private and voluntary organisations. The survey included residential and dual registered homes for elderly people with mental illness, but nursing homes which catered for elderly people with mental illness were not included if they were recorded simply as for people with mental illness in the database used for selecting the sample. Small homes, that is, those with fewer than four places (Department of Health, 1996), were not included in the survey. The survey was carried out in the local authorities which had agreed to participate in the 1995 survey of admissions, with a number of modifications. An amended version of the approach to the sampled homes used in the 1986 PSSRU/CHE survey was employed for the survey. The initial design of the fieldwork procedure also incorporated the modifications used for the local survey in the Canterbury and Thanet Health Authority area in 1987, in which the postal questionnaire sent to homes prior to the personal interview was restricted to collecting information about residents. However, the procedure was modified further in the light of pilot studies conducted by RSL in July and September 1996.

This section outlines the selection of local authorities, homes and residents, describes the pilot studies and the fieldwork procedure, and summarises the response to the survey. Appendix 2 gives full details of the selection of local authorities, the sampling of homes and residents, the response to the survey, and weighting procedures to adjust for representativeness at the level of the type of authority, varying selection probabilities at the home and resident level and varying response rate.

1.2.1 Selection of Local Authorities

The admissions survey was conducted in a stratified sample of 18 local authorities, which included five London boroughs, eight metropolitan districts and five counties. Since this sample was rather unbalanced, in terms of the number of authorities selected from each type of authority, and, in addition, London boroughs tend to have small numbers of homes, a number of additional authorities in the categories under-represented in the admissions survey were approached for the cross-sectional survey. One of the local authorities in the admissions survey had recently completed a similar internal survey, and so the final sample of 21 local authorities included 17 of the 18 authorities included in the admissions survey. The 21 authorities included in the cross-sectional survey included seven London boroughs, eight metropolitan districts and six counties.

1.2.2 Pilot Studies

The first pilot study was conducted in July 1996 in two of the selected local authority areas, with one interviewer being assigned to each area. Ten homes were selected in each area and the interviewers were instructed to conduct five full interviews and to collect information on the ease of completion of the postal questionnaire about residents for the other five homes. The approach adopted was based on that used successfully in previous surveys. Home managers were initially contacted by post. About one week later, they were sent a copy of the postal questionnaire to record information about residents, and asked to complete it before the personal interview. After a further week, interviewers telephoned home managers to arrange an appointment to conduct an interview and collect the postal questionnaire. The postal questionnaire provided space for a maximum of 50 permanent residents and a maximum of 25 short-stay residents, and used a grid format which was similar to that used in the surveys in 1981, 1986 and 1987. Respondents were instructed to apply a specified sampling procedure if the number of permanent residents exceeded 50. When the interviewer visited the home, copies of a questionnaire for staff were distributed with pre-paid envelopes to up to 20 members of the supervisory and care staff, and any others who came into regular contact with the residents. Where possible, the staff questionnaires were collected by the interviewer before leaving the home.

The first pilot study indicated that the questionnaires were generally satisfactory, but that the fieldwork procedure required modification, particularly the collection of information about residents. The use of a postal questionnaire to collect a substantial amount of information about a large number of residents was found to impose too great a burden on respondents. In addition, although respondents could provide information about a sample of residents, they did not follow the instructions given on the questionnaire. Although some amendments to the questionnaire about residents were possible, the need to maintain comparability with the

information collected in the admissions survey restricted the extent to which the questionnaire could be simplified. It was decided, therefore, to reduce the number of residents selected in each home and to instruct the interviewer to deliver the questionnaire to the home, rather than to send it in advance. The interviewer would then have to return to the home to collect the questionnaire about residents, but they would also be able to collect the staff questionnaires, for which some problems about distribution and return had occurred. This procedure would enable the interviewer to provide guidance to the respondent about completing the questionnaire about residents and to assist in selecting the sample of residents.

The second pilot study was conducted in September 1996 to test the revised fieldwork procedure. The pilot study was conducted in the same local authority areas as the first pilot study, with one interviewer being assigned to each area. Ten homes were selected in each area and each interviewer was instructed to conduct five interviews. The questionnaire about residents was redesigned and space was provided for a maximum of 20 permanent and 20 short-stay residents. The questionnaire for staff was distributed to up to 20 relevant members of staff. Where there were more than 20 relevant members of staff, copies of the questionnaire were distributed to those on duty and the home manager was asked to distribute the remainder of the 20 questionnaires randomly among the relevant members of staff.

The revised fieldwork procedures were found to be more successful than those tested in the first pilot study, and the reduction in the number of residents to be selected for the sample reduced the burden on the respondents. A number of modifications to the interview questionnaire were made as a result of the second pilot study, and the revised fieldwork procedures were adopted for the main survey. An alternative format for the questionnaire about residents, in which each individual was recorded on a separate page and which did not require respondents to transcribe codes onto a grid, was tested instead of the grid format in half of the homes in the pilot study. However, the grid format resulted in lower levels of item nonresponse than the alternative format, and was therefore retained for the main survey.

1.2.3 Selection of Homes and Residents

Within the 21 local authorities in the survey, separate samples of local authority homes, private residential and dual registered homes, voluntary residential and dual registered homes and registered nursing homes were selected with probability proportional to size. Since the number of homes in London boroughs tends to be small, the number of private residential and dual registered homes and the number of registered nursing homes selected in London were each doubled.

Within the selected homes, individual information was requested for all residents where there were no more than 20 residents, while for homes with more than 20 residents, corresponding information was requested for a sample of 20 residents, selected using a systematic sampling procedure administered by the interviewer. Samples of permanent and short-stay residents were selected separately, up to a maximum of 20 in each case. Since the probability of selection of some types of home in London was doubled, the relative probability of selection of the individuals in these homes was also doubled. Apart from this, the sample was designed to be approximately self-weighting for individuals, with two departures from self-weighting resulting from the separate treatment of permanent and short-stay residents and the complete enumeration of residents where there were no more than 20 in the home.

1.2.4 Fieldwork Procedure

The fieldwork took place during November 1996, and was largely completed by early December. However, in order to maximise response, the fieldwork was allowed to continue beyond this, and the last interview took place in early January 1997.

The fieldwork procedure tested in the second pilot study was employed for the main survey, in which an initial approach by letter to the selected homes was followed by a personal interview with the home manager. After conducting the interview, the interviewer left a copy of the questionnaire to collect information about individual residents and copies of the self-completion questionnaires for staff to complete, and these were collected subsequently. The questionnaire for staff was distributed to up to 20 relevant members of staff, following the procedure tested in the second pilot study.

The information collected in the personal interview included background information about the home, information about the type of care provided, the physical features of the home, staffing, contractual arrangements and charging arrangements, and covered similar topics as in the previous surveys. The information collected about the characteristics of residents was designed to correspond to the information collected in the 1995 survey of admissions and, as far as possible, to the information collected in the surveys conducted in 1981, 1986 and 1988. In particular, the cross-sectional survey was designed to enable the reproduction of a number of measures of resident dependency for comparison with the 1995 survey of admissions and the previous surveys. The questionnaire for staff incorporated the Sheltered Care Environment Scale (SCES), developed by Moos and Lemke (1992, 1994). This scale is designed to capture the atmosphere in the home, in terms of seven characteristics. These seven characteristics include: the levels of cohesion and conflict; the degree to which residents are encouraged to be independent or to disclose their feelings; the organisation of

the daily routine; the influence residents have on the rules of the home; and the physical comfort of the home.

1.2.5 Response to the Survey

Information was obtained for 673 of the 822 homes selected for the survey, a response rate of 82 per cent, but a complete response was obtained for 618 homes, 75 per cent of the original sample. Within the 618 homes which provided a complete response, information was obtained for 11,899 residents. The 618 homes which provided a complete response included 160 local authority homes (91 per cent of the original sample), 127 voluntary residential homes (83 per cent), 122 private residential homes (61 per cent), 41 dual registered homes (73 per cent) and 168 nursing homes (71 per cent). However, one nursing home was found to have a majority of residents aged under 65 and has been excluded from the analyses presented in this report. In a number of cases, the type of home reported by the respondent differed from the type of home recorded on the sampling lists, principally due to an increase in dual registration. These differences occurred for 51 of the 673 homes which responded and for 47 of the 618 homes which provided a complete response. For these homes, the type of home has been reclassified to correspond to that stated by the respondent for the analyses presented in this report. Full details of the reclassification of such homes are given in Appendix 2.

1.3 Conclusion

The data collected in the cross-sectional survey provide the basis for a wide variety of possible analyses. Some of these are described in Netten et al. (1996). This report provides a description of the results of the first main group of analyses of the survey. The second chapter describes the characteristics of the resident population and compares them with the results of previous surveys. A description of the characteristics of homes, again putting them in the context of the results of previous work, is presented in Chapter 3. Chapter 4 provides an analysis of prices and costs of both independent and local authority managed homes, focusing in particular on the relationship between costs and dependency. Chapters 5 and 6 examine evidence about actual area cost variations in residential and nursing care, in relation to the current arrangements for allowing for these variations in the allocation of central government funding to local authorities. The final chapter considers some of the policy relevance of the main findings of the survey to date. Two appendices contain, respectively, a description of previous surveys, and details of the sampling procedures, response rates and weighting procedures as they have been applied in this report.

1.4 Notes on the Tables

For the purpose of this report, both the home-level and the resident-level data have been weighted to ensure representativeness by type of authority and to adjust for varying selection probabilities and response rates, as described in Appendix 2. In the tables of information presented in this report, the data have been weighted to correspond to the national distributions of provision by each type of home, and overall estimates have been obtained by weighting the data in proportion to the number of homes of each type in England. As noted above, one home was found to have a majority of residents aged under 65, and has been excluded from the analyses presented in this report. Thus the tables of information about homes are based on 672 homes which provided usable home-level data, and the tables of information about residents are based on the subgroup of 617 homes which provided a complete response. The number of residents shown in the tables of resident-level data is the weighted number in each category, and the overall total is the sum of the separate weighted totals. The weighted number of residents in each category incorporates weights to compensate for the subsampling of residents within homes, and thus the weighted total number of residents differs from the unweighted total. For the purpose of statistical tests, the weighted totals would have to be rescaled to correspond to the achieved sample size, as explained in Appendix 2.

Percentages shown in the tables have been rounded to whole numbers and may not sum to 100 due to rounding. The following symbols have been used in the tables: '<1' denotes non-zero percentages of under one per cent; 'na' denotes information that was not available; and '-' denotes inapplicable items of information.

Chapter 2

Resident Characteristics

2.1 Introduction

The high cost of provision and the vulnerability of people who need residential or nursing home care mean that there is always interest in the nature of provision and who is receiving such care. Currently there are a number of areas of interest:

- Is there evidence that local authority assessment responsibilities assumed in April 1993 have had an impact on the nature of the publicly-funded population?
- What are the implications of the changing role of the NHS in the provision of long-term care?
- In view of proposals to consider eliminating the current divide between residential and nursing home registration procedures, how do residential and nursing home populations differ?
- How do privately-funded residents compare with publicly-funded residents?
- How do residents now compare with residents in the past?

In order to shed light on such issues this chapter describes the characteristics of elderly residents (aged 65 and over) in the survey and compares them across type of home, source of funding and type of stay.¹ In making these comparisons the results have been weighted to reflect the national picture, both within and across home type, as described in Appendix 2. The residents in this survey are then compared with the results of previous surveys of homes to provide an insight into the degree to which residents of residential and nursing home care have changed over time.

In the tables contained in this chapter, the number of individuals shown for each category of information drawn from the 1996 survey is the weighted number of individuals for whom the relevant information was obtained, with the exception of tables 2.15 to 2.20. As explained in Appendix 2, the weighting procedure was designed to compensate for the subsampling of residents within homes, and the number of residents shown in the tables for the 1996 survey corresponds to the weighted total number of residents in the homes which provided resident information. However, the weighted total number of residents was smaller than the total number of residents (20,226) in the respondent homes because the weighting procedure incorporated weights for unequal probabilities of selection of homes and to adjust for representativeness. For the purpose of statistical tests, the weighted totals would

¹ There is always a small proportion of residents less than 65 years old in homes which are primarily for older people. Unless specified, the younger residents have been included in all the descriptive statistics as they represent a small but important group of residents. Often they have physical disabilities and no more suitable accommodation can be found. Two per cent of residents were less than 40 years old. This younger group was more likely to be found in voluntary residential homes or private provision than in local authority accommodation.

have to be rescaled to the achieved sample size, as explained in the appendix. In tables where more than one type of information is presented, the number of individuals shown for each category is the maximum number of weighted cases for whom the relevant information was obtained. In tables 2.15 to 2.20, showing comparisons with information collected in 1981, 1986 and 1988, the numbers of homes shown in each table are the numbers of respondent homes which provided complete information, and the numbers of residents are the numbers of residents in these homes. In tables 2.21 to 2.23, the number of individuals shown for each category for 1986 is the maximum number of cases for whom the relevant information was obtained.

2.2 Type of Stay and Source of Funding

Some information about source of funding was identified for 76 per cent of residents. There was considerable variation in the level of information available about funding between different types of home. In local authority homes the source of funding was identified for 43 per cent of residents, compared with 85 per cent or more in other types of home. There was some concern about the accuracy of the distinction made by home managers between the sources of funding of publicly-funded residents. As far as possible, data were checked to identify whether any obvious misclassifications had occurred and the data recoded accordingly.²

Table 2.1 shows the pattern of funding by type of resident in each type of home weighted to reflect the distribution of residents over 65 by home type and the national population of homes. The privately-funded category includes 12 elderly people who were not being paid for by anybody at the time of the survey. When weighted to reflect the national distribution of residents, nearly 70 per cent of all residents were permanent and publicly funded. In independent residential care about a third of residents were privately funded, compared with only a quarter of residents in nursing homes.

Nationally, only 2 per cent of residents were funded by the NHS. Thirty per cent of residents who had any NHS funding were jointly funded with local authorities. When the data are weighted to reflect the national distribution of homes, the largest single proportion of NHS funded residents was located in nursing homes and dual registered homes (47 per cent) but the remainder, the majority overall, were located in residential care of one sort or another.

Dual registered homes showed a similar funding profile to nursing homes, although a much lower proportion of residents were funded through the NHS. In the sample as a whole, 60 per cent of

² The interim report of the survey (Netten et al., 1997) describes the basis for the reclassification. As the recoding resulted in a loss of information for those residents where the source of their public funding was unclear, the funding distinction is limited, when comparing characteristics by funding source in later tables, to publicly and privately funded residents.

beds in private dual registered homes and 54 per cent in dual registered voluntary homes were registered as nursing beds.

Although it was noted above that considerable caution should be used in interpreting the information on source of funding provided by managers of local authority homes, the proportion of residents identified as wholly privately funded was the same as that found in an earlier study of three authorities, which found that six per cent of 1,720 residents in local authority homes were paying full cost fees (Darton, 1992).

Short-term residents were predominantly funded by local authorities, and placed in local authority homes. Comparing the proportion of short-term residents found in each type of home in the survey with the national distribution of residents in each home type, it is estimated that 62 per cent of all short-term placements were in local authority homes. Of local authority funded short-term care residents, 81 per cent were in local authority homes when the survey sample was adjusted to reflect the distribution of publicly-funded residents in homes nationally (Department of Health, 1997c).

Information about who changed from being entirely privately funded to being partially or wholly publicly funded was most readily available from privately-run establishments. (Information about changes in funding was available for only 26 per cent of residents in local authority homes.) Of those permanent, publicly-funded residents who were 65 or over at the time of the survey³ and for whom information was given, 14 per cent were identified as having been admitted as wholly privately funded. As would be expected, a higher proportion of DSS funded residents had become publicly funded during their stay than local authority supported residents. Data were available for 76 per cent of residents who were DSS funded and for 73 per cent of local authority funded residents. Among those supported by the DSS, 23 per cent of elderly residents had been wholly funding themselves on admission. This compares with just 11 per cent of elderly residents who were supported by local authorities. These proportions are higher than reported earlier for the total population of homes as they exclude publicly-funded residents under the age of 65 who are much less likely to be spend-down cases.

Managers in independent homes were asked how many residents had become spend-down cases by becoming publicly funded during the year. In total, 142 (38 per cent) of the independent homes had any spend-down cases. The total number of spend-down cases was 280, 32 of which were accounted for in one home. Fifty-two per cent of spend-down cases were preserved rights residents. Information was not collected about the age of these residents but the distribution of spend-down amongst individual residents suggests that the vast majority would have been elderly.

³ Omitting those 154 residents who were privately funded at the time of the survey and who were identified as changing from private to public funding.

These cases represent a very small fraction of the total population of the homes - less than 2 per cent of available places in any one year. They were located almost entirely in residential homes.

2.3 Length of Stay

Table 2.2 shows the average and distribution of length of stay for permanent residents and the planned length of stay for short-term residents by type of home. For permanent residents the national average uncompleted length of stay was 36 months, with nursing home residents having been in the home for a significantly shorter length of time: 30 months on average. Median length of stay was much shorter: 24 months overall, 21 months in nursing homes. Even this is longer than predicted length of stay on admission. The longitudinal study has found that the median length of stay of publicly-funded admissions to a nursing home was one year (Bebbington et al., 1998). Among residential homes, people in voluntary homes had been in the home for longer: nearly four years on average (median 31 months), compared with just over three years in private and local authority accommodation (median 25 and 24 months respectively).

Nationally, just under 30 per cent of residents had been in the home for a year or less. This proportion varied by home type, with nursing homes having a higher proportion of recent admissions and voluntary residential homes a lower proportion. The difference was not entirely due to the more rapid turnover in nursing homes, however. There was also variation in the proportion who had been resident for a very long period, defined as five years or more. This ranged from just 15 per cent in nursing homes to 26 per cent in voluntary residential homes. Overall, a fifth of residents nationally had been resident in homes for more than five years. The maximum length of stay among all residents who were aged 65 or over at the time of the survey was 48 years. Once those who had been admitted when they were less than 65 were excluded, the maximum length of stay was 22 years.

Table 2.3 shows length of stay information by type of funding. Publicly-funded permanent residents had been living in homes four months longer, on average, than privately-funded residents. The proportions of privately and publicly-funded elderly residents who had been in the home less than a year were virtually identical. The difference is primarily due to the higher proportion of publicly-funded people who had been in the home for longer periods.

Among publicly-funded residents, 69 per cent of short-term placements were for 14 days or less, 29 per cent for exactly two weeks. Although the proportion of private payers staying for two weeks was virtually the same, overall they were planning to stay longer on average, with 27 per cent planning to stay more than four weeks. In 24 per cent of cases home managers did not know whether the short-stay resident was a regular user of short-term care. Of the remaining cases,

however, the majority (74 per cent) were regular users, with 55 per cent having visited the home before, while 19 per cent were on their first visit, with the intention that it should become regular. Publicly-funded residents were more likely to be regular short-stay visitors than privately-funded residents, but even among privately-funded residents 65 per cent were, or were planning to be, regular visitors.

2.4 Source of Admission

Tables 2.4 and 2.5 show the source of admission by type of home and funding. As noted above, the pattern of admissions in dual registered homes appears closer to nursing homes than residential homes. As would be expected, a significantly higher proportion of people in nursing homes were admitted from hospital and a significantly lower proportion from single person households. Residents in local authority homes were more likely to be admitted from multi-occupancy households. This was due in part to the higher proportion who were short-term residents, but also held true for permanent residents alone: 19 per cent of permanent residents in local authority homes were admitted from multi-occupancy households, compared with 13 per cent in independent homes. This may well be due to the different arrangements for admitting publicly-funded residents. Publicly-funded permanent residents were significantly less likely to have been admitted from single person households and more likely to be admitted from hospital than privately-funded permanent residents.

2.5 Age and Gender

Tables 2.6 and 2.7 show the age and gender of residents by type of home, type of stay and funding. Significantly higher proportions of elderly residents were male in local authority run residential homes and nursing homes, than in independent residential homes. Among permanent residents, nearly 80 per cent of residents were female. A significantly lower proportion of short-stay residents was female (about 70 per cent).

Among residents aged 65 or over, the national average age was 85 years. The admissions survey found that people admitted to nursing homes were slightly, but significantly, younger than those admitted to residential care. This is reflected in the population of homes. At an average age of 84, publicly-funded residents were significantly younger than privately-funded residents (who were 86 years old on average).

2.6 Dependency

2.6.1 Functional ability

Tables 2.8 and 2.9 show levels of dependency by type of home, type of resident and source of funding. Functional ability information is shown by a number of activities of daily living, average Barthel scores and Barthel based dependency groups. This widely used scale ranges from 0-20 with lower scores indicating higher levels of dependency (Rodgers et al., 1993).

As would be expected, residents in nursing homes were much more dependent than those in any form of residential care. This was true for each of the self-care tasks individually and using the Barthel score. Nearly 40 per cent of cases in nursing homes fell into the most dependent Barthel category, compared with about 10 per cent in all forms of residential care. Nationally, a fifth of all residents were estimated to be in the most dependent group.

Both types of independent residential care showed a similar dependency profile. Residents in local authority homes, however, had a lower average Barthel score, reflected in a noticeably lower proportion of residents in the least dependent group, compared with other forms of residential accommodation. The vast majority of residents in local authority provision were publicly funded and all of them will have been assessed by the authority prior to admission.

Table 2.9 compares dependency by source of funding. The weighted sample which reflects the national distribution of residents shows that, overall, privately-funded permanent residents were significantly less dependent than publicly-funded permanent residents. The difference is not large but probably is increasing. Of recent admissions (those admitted during the previous 12 months), the proportion of residents in the least dependent group (with Barthel scores over 12) was 53 per cent for privately-funded residents and 42 per cent among publicly-funded residents.

It is noticeable, however, that there are still significant numbers of people in residential care who have low levels of impairment. Nearly one fifth of all residents scored 17 or more on the Barthel scale and were fully intact on the MDS Cognitive Performance Scale (Morris et al., 1994). The proportion was slightly lower (17 per cent) among publicly funded people who were admitted during the past year. While there may be unmeasured reasons for such people being appropriately placed in residential care, this finding begs the question whether some people may be recovering after admission and could have subsequently returned to a private household. In the comparison of local authority funded admissions with current residents there were higher proportions in the least dependent group among current residents (42 per cent) than among new admissions (34 per cent) (Netten et al., 1997). In the longitudinal survey of publicly-funded admissions, 24 per cent of survivors were classified in a lower dependency group (i.e. more independent) six months after

admission (Darton and Brown, 1997).

There was no significant difference between dependency levels according to source of funding in private residential homes. Tables 2.21 and 2.23, which compare dependency over time, show that the difference in dependency levels according to source of funding was limited to voluntary residential care and nursing homes. It is not clear why in residential care the difference was restricted to voluntary provision. Local authority funded residents in nursing homes were significantly more dependent than other local authority funded residents, but there was no significant difference in dependency between local authority funded residents in different sectors of residential care (Netten et al., 1997).

For both privately and publicly-funded residents, those who are admitted from single person households were less dependent than those admitted from shared households. These in turn were less dependent than those who were admitted from hospital. Within these groups, whether people were privately or publicly financed had no significant relationship with dependency *except* among those admitted from single person households. In this group, privately-funded people were less dependent ($p < 0.05$). The greater prevalence of privately-funded people being admitted from single person households (and who have access to assets tied up in their previous homes) means that, overall, privately-funded people were less dependent than publicly-funded residents.

One important group within currently publicly-funded residents are spend-down cases: those who were admitted as privately funded and ran out of assets. As would be expected, this group had been living in homes longer than other residents on average (49 months compared with 34 months for other publicly-funded residents). Table 2.10 compares the characteristics of residents who were publicly funded, privately funded or spend-down cases. The overall level of dependency of spend-down cases appears to lie between privately and publicly-funded residents, with an average Barthel score of 11.0, compared to 10.7 for publicly-funded residents and 11.6 for privately-funded residents.

With the exception of NHS-funded residents, short-stay residents were significantly less dependent than permanent residents on all measures of functional ability.

2.6.2 Nursing care

Tables 2.11 and 2.12 show the need for, and external provision of, nursing care. In all forms of residential based care, nearly a half of all residents needed some form of nursing care. As would be expected, nursing home residents needed more nursing care. Only 15 per cent of residents did not have a specific nursing need identified. However, as this would be provided in a nursing home, relatively little use was made of district nursing services, with less than four per cent of residents being visited at all. By contrast, less than a quarter of elderly residents of residential homes needed nursing

care of any sort, but for the most part this was provided by community nurse visits.

The distribution of short-stay residents across home type (primarily in residential rather than nursing home care) probably accounts for the pattern of need and service receipt shown in table 2.12. Short-stay residents were significantly less likely to need nursing care, and more likely to be receiving visits from district nurses during their stay than were permanent residents.

2.6.3 Mental state

Tables 2.13 and 2.14 show indicators of mental state by home and funding type. The measure of confusion used for the survey was based on an approximation to the seven-category MDS Cognitive Performance Scale (Morris et al., 1994), grouped into three categories (see note to table 2.13) for the purpose of comparison with information collected in a single question in previous surveys. There was a similar pattern to that described above in relation to physical dependency. Residents of nursing homes showed the highest level of cognitive impairment and behavioural disturbance. Among residential homes, local authority run establishments had a higher proportion of residents with cognitive impairment than private homes. Private and voluntary homes had similar levels of cognitive impairment among their residents, but voluntary homes were more likely to be caring for people displaying frequent antisocial behaviour.

There was a significantly lower proportion of privately-funded residents who had any kind of cognitive impairment or behavioural problem than publicly-funded residents whether they were permanent or short-stay. Again the difference was restricted to voluntary residential and nursing homes. Short-stay residents were significantly less cognitively impaired or likely to be exhibiting antisocial behaviour than permanent residents.

2.7 Comparisons over Time

As explained in Chapter 1, the survey was designed to provide comparable information to that collected in previous surveys conducted in 1981, 1986 and 1988, allowing a description of how the characteristics of elderly people living in residential care and nursing homes have changed over the period 1981-1996. Tables 2.15 to 2.19 draw on information collected in the four surveys. The surveys in 1981 and 1986 were conducted by the PSSRU, the 1986 survey being conducted in collaboration with the Centre for Health Economics (CHE) at the University of York, while the 1988 survey was a survey of local authority residential homes undertaken by the Social Services Inspectorate (SSI) of the Department of Health (Department of Health Social Services Inspectorate, 1989). These surveys are described in Appendix 1. In order to make valid comparisons with the results of the previous surveys, the 1996 figures include people under the age of 65 and residents in

dual registered homes are omitted.

2.7.1. Age and gender

The proportions of female residents in the 1996 survey were similar to those in the 1986 and 1988 surveys for local authority and independent residential homes, whereas males accounted for a slightly larger proportion of residents in nursing homes in 1996 than in 1986. Among local authority residential homes, the proportions of females were similar on all three occasions, whereas the proportion of females was greater than in 1981 in voluntary residential homes and smaller than in 1981 in private residential homes.

The mean ages of residents in residential homes in 1996 were slightly higher than in the 1986 and 1988 surveys, but the difference was more marked for nursing homes due to a ten year difference in the mean ages of male residents in the two surveys. Among residential homes, the changes in mean ages between 1986/88 and 1996 continued an upwards trend between 1981 and 1986/88 for local authority and voluntary homes. However, the mean age of residents in private residential homes declined between 1981 and 1986, and the mean age for males was slightly lower and the mean age for females was slightly higher in 1996 than in 1981.

2.7.2. Length of stay

For local authority and voluntary residential homes and for nursing homes, the distributions of length of stay for permanent residents in the 1996 survey were similar to those in the 1986 and 1988 surveys (table 2.16). The mean lengths of stay for voluntary residential homes and for nursing homes were slightly shorter in 1996 than in 1986, whereas a comparison of the distributions of length of stay for local authority homes would suggest that the mean length of stay for local authority homes was unchanged during this period.

In contrast, the distribution of length of stay for permanent residents in private residential homes in 1996 was substantially different from that in 1986. In 1996, permanent residents in private homes resembled those in local authority homes, 28 per cent had been in the home for less than one year and the mean length of stay was 37 months. In 1986, however, 43 per cent of permanent residents in private residential homes had been in the home for less than one year, and the mean length of stay was 22 months. The results of a study conducted in three local authorities in 1992 are consistent with the changes in length of stay of residents in private residential homes between the 1986 and 1996 surveys. In the 1992 study, the mean length of stay of residents in private residential homes was 31 months, and 30 per cent of residents had been in the home for less than one year and 15 per cent had been in the home for five years or over (Darton, 1994a). The corresponding figures for local authority homes were also consistent with the distribution of length of stay in the 1988 and 1996 surveys. However, the residents in voluntary residential homes and in nursing homes in the three local

authorities had shorter lengths of stay. In the 1992 study, the mean length of stay was 36 months in voluntary residential homes and 21 months in both private and voluntary nursing homes (Darton, 1994a).

For local authority residential homes, the distributions of length of stay for permanent residents remained fairly constant between the 1981, 1988 and 1996 surveys. For voluntary residential homes, the mean length of stay was substantially shorter in 1986 and 1996 than in 1981, although in 1996 voluntary residential homes still had the largest proportion of residents who had been in the home for five years or over. For private residential homes the mean length of stay in 1986 was shorter than in 1981, but this was probably due to the rapid expansion of the private residential care sector in the 1980s (Darton and Wright, 1993), and the length of stay distributions for these two years were more similar to each other than to the 1996 distribution.

The information collected on length of stay in each of the four surveys related to the length of stay of current residents at the time of the particular survey, that is, the uncompleted length of stay. In such cross-sectional surveys, residents with shorter lengths of stay will be under-represented compared with those with longer lengths of stay. In homes with high levels of turnover, the mean length of stay computed for current residents will exceed the mean completed length of stay for leavers, as was demonstrated in the study conducted in three local authorities in 1992. In this study, the completed length of stay was obtained for those residents who left the home during a three month period. The highest turnover rates were in private nursing homes, and in these homes the uncompleted length of stay was 21 months, whereas the completed length of stay for leavers was 17 months (Darton, 1994a).

2.7.3. Source of admission

Compared with 1986, a larger proportion of residents in nursing homes in 1996 had been admitted from hospital (table 2.17). Among residential homes, the proportion of residents admitted from hospital had increased in voluntary homes, but the proportion had decreased for local authority and private residential homes. The decline in the proportion of residents in local authority homes admitted from hospital continued the downwards trend between 1981 and 1988, but the proportion of residents in private residential homes admitted from hospital in 1996 was similar to that found in the 1981 survey.

Residents in local authority and private residential homes were more likely to have been living alone prior to admission in 1996 than in the previous surveys, whereas the proportion of residents in voluntary homes who had been living alone was slightly greater in the 1986 survey than in 1981 or 1996. However, residents in voluntary residential homes were more likely to have been living alone in all of the surveys.

The proportion of residents recorded as having transferred from another home remained fairly constant across the surveys, but the proportion of residents admitted from sheltered housing increased over the period.

2.7.4. Physical dependency

Table 2.18 shows that in all types of home, problems of physical functioning were greater in 1996 than in 1986/88. But changes in levels of physical functioning were more marked in voluntary residential homes and nursing homes than in local authority and private residential homes, particularly in relation to continence. In residential homes in the 1996 survey, levels of mobility, the need for assistance in self-care tasks and levels of continence were quite similar, whereas, prior to 1996, levels of physical dependency among residents of voluntary residential homes were lower than among residents of local authority and private residential homes.

In the 1981 survey, residents in local authority and private residential homes had similar levels of physical dependency, but levels of physical dependency among residents of the local authority homes in the 1988 survey were higher than those recorded for private homes in 1986, with the exception of the need for assistance with self-care tasks. Levels of physical dependency increased between 1981 and 1986/88 in local authority and voluntary residential homes, but among private homes levels of physical dependency in 1986 were very similar to those in 1981.

2.7.5. Mental state

Extra caution needs to be exercised when comparing measures of mental state over time because of concerns about the comparability and reliability of measures.

As noted above, the measure of confusion used for the 1996 survey was based on an approximation to the seven-category MDS Cognitive Performance Scale (Morris et al., 1994), grouped into three categories for the purpose of comparison with information collected in a single question in the previous surveys. Although comparisons of levels of confusion are complicated by this change in the method of calculation, levels of confusion do appear to have been greater in 1996 than in previous years (see table 2.19). This was particularly noticeable in nursing homes, in which 21 per cent of residents were classified as severely confused in the 1986 survey, compared with 44 per cent who were classified as severely cognitively impaired in the 1996 survey. Among residential homes, the changes appear most marked in the intact (mentally alert) and mild impairment (mildly confused) categories, and changes in levels of confusion were more marked in voluntary residential homes than in local authority and private residential homes, although the proportion of residents classified as intact (mentally alert) fell from 41 per cent to 28 per cent in local authority homes and from 52 per cent to 32 per cent in private residential homes between 1986/88 and 1996. As in the case of physical dependency, mental confusion was less prevalent among residents of voluntary residential homes than

among residents of local authority and private residential homes prior to 1996.

In the 1981 survey, residents in local authority homes had somewhat higher levels of confusion than residents in private residential homes, but levels of confusion were substantially lower among residents of voluntary residential homes. Between 1981 and 1986/88, levels of confusion increased slightly among residents of local authority homes and more substantially among residents of voluntary residential homes, but, as in the case of physical dependency, levels of confusion among residents of private residential homes in 1986 were very similar to those in 1981.

Similar reservations need to be made when comparing behaviour of residents. Antisocial behaviour was classified in terms of frequency for the 1996 survey, but in terms of level of disruption in the previous surveys. On this basis, as in the case of physical functioning and mental confusion, changes in the level of antisocial behaviour between 1986/88 and 1996 were greatest for residents of voluntary residential homes and nursing homes. Between 1986/88 and 1996, the level of antisocial behaviour appears to have increased for residents of private residential homes, but not for residents of local authority homes. Between 1981 and 1986/88, levels of antisocial behaviour increased slightly among residents of local authority residential homes, but not among residents of independent residential homes.

Considerable caution should also be used when drawing conclusions about reported levels of anxiety and depression among residents as other studies have found that clinical levels of depression are frequently not identified by staff in homes (Schneider and Mann, 1997). Thus changes in reported levels of depression and anxiety and differences in levels between home type may reflect variation in staff perceptions as much as variations in prevalence of depression. Given this, the overall pattern again shows that where there is any change it is most marked as an increase in the reported levels of depression and anxiety in nursing homes and voluntary residential homes.

2.7.6 Aggregate measures of dependency

The two summary measures of dependency shown in table 2.20 reinforce the results of the separate comparisons of individual aspects of physical and mental functioning. The Index of ADL (Katz et al., 1963, 1970) is based on six functions: bathing, dressing, toileting, transfer, continence and feeding. The DHSS 4-category measure was developed for the 1970 Census of Residential Accommodation (DHSS, 1975). The DHSS measure is based on mobility, continence, mental state (confusion), and the capacity for self-care in washing, bathing, dressing, feeding and using the toilet, and is defined in Davies and Knapp (1978).

Using these indicators, residents in nursing homes in 1996 were substantially more dependent than residents in residential homes. Sixty-eight per cent of residents in nursing homes were classified in

categories E, F or G of the Index of ADL, corresponding to dependence in bathing, dressing, toileting and in at least one other function, and 76 per cent were classified as heavily dependent on the DHSS dependency measure. In contrast, approximately 25 per cent of residents in residential homes were classified in categories E, F or G of the Index of ADL, and 37 per cent were classified as heavily dependent on the DHSS dependency measure.

In the 1996 survey, levels of dependency were quite similar across the different types of residential home, the proportion of residents classified as heavily dependent ranging from 32 per cent in voluntary residential homes to 41 per cent in local authority homes. The two summary measures cannot be reproduced for local authority homes in the 1988 survey without access to the original data, but the lower levels of dependency among residents of voluntary residential homes prior to 1996 are still evident in the table.

As noted above for individual aspects of physical and mental functioning, levels of dependency were greater in all types of home in 1996 than in 1986/88, but the changes were greater for voluntary residential homes and nursing homes, and the summary measures reinforce this. Between 1986 and 1996, the proportion of residents classified as heavily dependent increased from 20 per cent to 32 per cent in voluntary residential homes and from 54 per cent to 76 per cent in nursing homes, compared with an increase from 29 per cent to 36 per cent in private residential homes. Levels of dependency increased between 1981 and 1986 in voluntary residential homes, but, among residents of private homes, levels of dependency in 1986 were very similar to those in 1981, as noted above.

The information collected in the 1981 survey indicated that, overall, residents in local authority and private residential homes had similar levels of dependency, particularly in relation to physical abilities and continence, and, to a lesser extent, mental state, and were much more dependent than residents in voluntary residential homes. Twenty-eight per cent of residents in local authority and private residential homes were classified as heavily dependent, compared with 12 per cent of residents in voluntary residential homes. However, a higher proportion of residents in private residential homes were relatively independent, 34 per cent being classified as minimally dependent, compared with 25 per cent of residents in local authority homes.

Between 1981 and 1986/88 levels of dependency among residents of local authority and voluntary residential homes increased, but levels of dependency among residents of private residential homes were very similar in 1981 and 1986, possibly due to the rapid expansion of the private residential care sector in the 1980s (Darton and Wright, 1993). A previous analysis of changes in dependency between 1970/71 and 1981, using information collected in the 1970 Census of Residential Accommodation (DHSS, 1975) and the 1971 DHSS sample survey of private residential homes indicated that resident dependency had increased in all three residential care sectors, although

changes in the voluntary sector were relatively small, while changes in the private sector were most marked (Darton, 1984).

2.7.7 Source of funding and changes in dependency over time

Tables 2.21 to 2.23 show the same indicators of functional, cognitive and aggregate measures of dependency for the 1986 and 1996 surveys by type of home and source of funding. Levels of dependency have risen for both privately and publicly-funded residents over the period. This may be due in part to the introduction of assessment as a proportion of privately-funded residents will have been assessed by local authorities prior to admission. It was noted above that the difference in dependency levels which has emerged according to source of funding in the 1996 survey is restricted to nursing homes and voluntary residential homes.

2.8 Discussion

In the introduction, five areas of current interest were raised which the survey can help address: the impact of the 1993 community care reforms; the impact of the changing role of the NHS; the residential-nursing home divide; the comparison of privately-funded and publicly-funded residents; and changes in the type of resident being cared for over time.

Previous work, reflecting the pattern of home use before the introduction of the 1993 reforms, found little difference between people who were privately funded and those supported by public funds in independent homes. This picture appears to be changing, with the most recently admitted publicly-funded residents being significantly more dependent than privately-funded residents in nursing homes and voluntary residential homes. This suggests that, as a result of the reforms, the type of resident who is publicly funded has changed in the direction that the reforms were designed to encourage. Moreover, there has been a rise in the level of dependency of privately-funded residents, which in private residential homes, appears to have kept pace with publicly-funded residents. This may be due in part to those residents who are assessed by local authorities but who are able to meet full fees.

With respect to the changing role of the NHS there has also been a shift to admitting more people directly from hospital. This is in part associated with the higher levels of dependency of local authority assessed residents. The proportion of residents in voluntary residential homes and nursing homes who had been admitted from hospital was greater in 1996 than in 1986, whereas the proportion had decreased for private residential homes and, to a greater extent, for local authority homes. In addition, there is a small, but very dependent group of NHS funded residents. Should this group expand there would be important implications for the cost and nature of residential and nursing home care.

The third issue raised was the potential for removing the current divide between nursing and residential care in registration arrangements. Residents in the dual registered homes in the survey were more similar to nursing home than residential care residents. For the most part, however, in terms of resident populations there appeared to be a very clear divide, particularly between publicly-funded residents in independent residential and nursing homes. Changing patterns of dependency mean this divide is even more marked than in the past. While changes in arrangements may provide welcome oversight of the nursing needs of residential home residents (Schneider et al., 1997), some of the most important implications will be the resulting impact on the costs of care (see Chapter 4).

The evidence seems to suggest that there are some people in residential care that could be cared for in the community. This might arise from the process of admission. For example, elderly people who are admitted from living alone are more likely to have the assets arising from the sale of their home, and so more likely to be privately funded. There was a significantly higher proportion who were in the lowest dependency groups, both in terms of cognitive and physical impairment, among those who were privately funded and admitted from single person households. In the absence of expert advice and access to services it may well appear to relatives that it is necessary to move into residential accommodation because a person is old, alone and has some impairment. However, this does not account for the publicly-funded residents who were also to be found at relatively low levels of dependency. Alternatively, low dependency people may be in residential care because they have recovered after admission. There is some evidence from the longitudinal survey supporting this, although the data are not strictly comparable since social workers provided the initial assessment and home managers the six month follow-up. Nevertheless, if this were the case it would suggest some scope for rehabilitation services that would prevent long-term admission to care.

The changing nature of publicly-funded residents being cared for in homes is primarily reflected in levels of dependency. Levels of dependency increased in all types of home between 1986/88 and 1996, but the changes were greater for voluntary residential homes and nursing homes. In 1996, residents in nursing homes were substantially more dependent than residents in residential homes, whereas levels of dependency among residents of local authority, private and voluntary residential homes were quite similar. Prior to 1996, residents in voluntary residential homes exhibited lower levels of dependency than residents in local authority and private residential homes.

These changes probably reflect the degree to which voluntary residential care is more closely resembling private provision than in the past, although length of stay is still longer than in other types of home. The increase in length of stay of residents in private homes probably reflects the fact that homes in 1996 tended to be established for longer than in the mid-1980s when the market was rapidly expanding.

Clearly there have been considerable changes in the type of resident being cared for in recent years. In order to consider how these residents are being cared for and the degree to which the provision itself is changing we need to turn to the characteristics of the homes themselves.

Table 2.1: Type of resident and type of funding by home type

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
Number of residents (65+)	2198	1868	2482	1886	3493	11927
<i>Permanent residents</i>						
Publicly funded (%)						
DSS funded	0	25	25	20	23	22
LA funded	79	38	39	50	46	45
NHS funded ²	2	<1	1	<1	4	2
Publicly funded from any source ²	80	64	66	71	74	69
Privately funded (%)	8	34	33	27	25	29
<i>Short-stay residents</i>						
Publicly funded (%)						
LA funded	9	<1	<1	<1	0	<1
NHS funded	2	0	0	0	<1	<1
Total	11	<1	<1	<1	<1	2
Privately funded (%)	1	<1	<1	<1	<1	<1

Notes: 1. For each type of home the results are weighted to reflect the national distribution of that type of home. The data for all homes are also weighted to reflect the national distribution of home type.

2. Includes joint NHS and LA funded.

Table 2.2: Length of stay by home type

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Permanent residents</i>						
Total number of permanent residents (65+)	4322	2009	2849	2116	3990	15286
Mean length of stay (months)	39	37	46	32	30	36
Length of stay (%)						
6 weeks or less	3	4	3	4	6	4
6 weeks - 3 months	4	5	4	5	6	5
3-6 months	5	5	4	5	6	5
6 months - 1 year	14	15	12	14	15	14
1-2 years	21	18	19	21	20	19
2-3 years	14	13	13	16	16	14
3-4 years	11	11	11	10	11	11
4-5 years	7	8	8	8	7	8
5 years and over	22	22	26	16	15	20
<i>Short-stay residents</i>						
Total number of short-stay residents (65+)	484	25	52	34	53	648
Planned length of stay (%)						
Under 7 days	19	48	16	12	8	21
7-13 days	22	16	21	15	4	18
14 days	28	16	39	41	53	31
15-20 days	3	0	0	0	0	2
21-27 days	8	8	4	15	15	10
28 days and over	21	12	21	18	21	19

Note: 1. For each type of home the results are weighted to reflect the national distribution of that type of home. The data for all homes are also weighted to reflect the national distribution of home type.

Table 2.3: Length of stay by funding type

	<i>Type of funding</i>	
	<i>Public</i>	<i>Private</i>
<i>Permanent residents</i>		
Total number of permanent stay residents (65+)	8871	3005
Mean length of stay (months)	37	33
Length of stay (%)		
6 weeks or less	4	4
6 weeks - 3 months	5	4
3-6 months	5	5
6 months - 1 year	14	15
1-2 years	18	22
2-3 years	14	14
3-4 years	11	11
4-5 years	7	8
5 years and over	21	17
<i>Short-stay residents</i>		
Total number of short-stay residents (65+)	322	88
Planned length of stay (%)		
Under 7 days	20	15
7-13 days	20	14
14 days	29	30
15-20 days	1	1
21-27 days	8	14
28 days and over	22	27

Note: 1. Data are weighted to reflect national distribution of home type.

Table 2.4: Source of admission by home type

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
Total number of residents (65+)	4703	2077	2881	2068	4152	15881
Source of admission (%)						
Single person h'hld	36	40	48	23	17	32
Multi-occupancy h'hld	23	13	14	14	15	15
Single person shelt hsng	9	6	9	5	3	6
Multi-occ shelt housing	1	1	1	1	1	1
Residential home	11	13	10	9	10	11
Nursing home	1	1	2	5	9	4
Hospital	18	24	16	42	46	30
None of these	2	2	1	2	0	1

Note: 1. For each type of home the results are weighted to reflect the national distribution of that type of home. The data for all homes are also weighted to reflect the national distribution of home type.

Table 2.5: Source of admission by type of resident and type of funding

	<i>Permanent stay</i>		<i>Short stay</i>	
	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>
Number of residents (65+)	8136	3127	173	69
Source of admission (%)				
Single person h'hld	27	43	33	36
Multi-occupancy h'hld	14	14	40	39
Single person shelt hsng	6	4	10	6
Multi-occ shelt hsng	1	<1	1	3
Residential home	12	8	1	1
Nursing home	4	4	0	0
Hospital	34	25	13	15
None of these	1	1	2	0

Note: 1. Data are weighted to reflect national distribution of home type.

Table 2.6: Characteristics of residents by home type

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
Total number of residents (65+)	4902	2113	2948	2160	4192	16315
Mean age	85	85	86	85	84	85
Age group (%)						
65-69	2	3	2	2	4	3
70-74	8	6	6	7	8	7
75-79	13	11	11	12	14	12
80-84	22	22	21	20	22	22
85-89	28	30	30	29	28	29
90-94	19	20	22	21	19	20
95-99	7	6	8	8	5	6
100 and over	1	1	1	1	1	1
% female	75	80	81	75	76	78

Note: 1. For each type of home the results are weighted to reflect the national distribution of that type of home. The data for all homes are also weighted to reflect the national distribution of home type.

Table 2.7: Characteristics of residents by type of resident and type of funding

	<i>Permanent stay</i>		<i>Short stay</i>	
	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>
Number of residents (65+)	8268	3168	173	71
Mean age	84	86	83	84
Age group (%)				
65-69	4	1	5	4
70-74	8	5	10	6
75-79	13	9	13	17
80-84	22	20	25	21
85-89	27	33	26	30
90-94	19	23	19	16
95-99	6	7	2	6
100 and over	1	1	0	0
% female	77	80	71	75

Note: 1. Data are weighted to reflect national distribution of home type.

Table 2.8: Measures of dependency by home type

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
Total number of residents (65+)	4895	2916	2092	2110	4174	16187
Barthel Index of ADL (ungrouped)						
Mean	13	14	14	9	7	11
Std dev	5	6	5	6	5	6
Barthel Index of ADL (grouped) (%)						
Low dependence (Score >12)	57	63	64	33	20	47
Moderate dependence (Score 9-12)	18	16	15	17	14	16
Severe dependence (Score 5-8)	15	12	13	23	27	18
Total dependence (Score 0-4)	10	10	8	28	39	20
Self-care tasks (% needing assistance)						
Wash hands and face	27	27	24	44	56	36
Bath or wash all over	86	80	79	84	92	84
Dress	43	42	36	64	81	55
Feed self	6	9	8	18	27	14
Use WC	32	31	25	55	73	45
Transfer (bed/chair)	27	27	23	54	69	41
Any self care task	87	81	79	84	93	85

Note: 1. For each type of home the results are weighted to reflect the national distribution of that type of home. The data for all homes are also weighted to reflect the national distribution of home type.

Table 2.9: Measures of dependency by type of resident and type of funding

	<i>Permanent stay</i>		<i>Short stay</i>	
	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>
Number of residents (65+)	8185	3158	171	66
Barthel Index of ADL (ungrouped)				
Mean	11	12	13	14
Std dev	6	6	5	5
Barthel Index of ADL (grouped) (%)				
Low dependence (Score >12)	45	50	57	72
Moderate dependence (Score 9-12)	16	16	16	12
Severe dependence (Score 5-8)	18	17	21	10
Total dependence (Score 0-4)	21	18	6	7
Self-care tasks (% needing assistance)				
Wash hands and face	38	34	28	20
Bath or wash all over	84	84	86	80
Dress	57	53	49	41
Feed self	15	14	5	3
Use WC	48	43	35	23
Transfer (bed/chair)	44	39	35	24
Any self care task	85	85	86	76

Note: 1. Data are weighted to reflect national distribution of home type.

Table 2.10: Characteristics of permanent residents by type of funding

	<i>Public</i>	<i>Spend-down</i>	<i>Private</i>
Number of residents (65+)	6811	860	2999
Length of stay (%)			
6 weeks or less	5	<1	4
6 weeks - 3 months	6	3	5
3-6 months	6	4	5
6 months - 1 year	14	11	16
1-2 years	18	15	22
2-3 years	14	17	14
3-4 years	10	14	10
4-5 years	7	11	8
5 years and over	20	26	17
Mean length of stay (months)	34	49	33
Source of admission (%)			
Private housing - alone	25	30	43
Private housing - with others	13	13	14
Sheltered housing - alone	6	6	3
Sheltered housing - with others	1	2	<1
Residential home	12	9	8
Nursing home	4	3	4
Hospital	35	35	25
Other/not known	3	2	2
Barthel Index of ADL (grouped) (%)			
Low dependence (Score >12)	44	45	50
Moderate dependence (Score 9-12)	16	15	16
Severe dependence (Score 5-8)	18	20	16
Total dependence (Score 0-4)	23	19	18
Mean Barthel Index of ADL	10.7	11.0	11.6
MDS Cognitive Performance Scale (%)			
Intact	24	21	30
Borderline intact	16	15	15
Mild impairment	14	20	13
Moderate impairment	16	16	14
Moderately severe impairment	6	8	5
Severe impairment	20	17	18
Very severe impairment	4	4	3

Table 2.11: Nursing care by home type

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
Total number of residents (65+)	4811	1896	2845	2108	4168	15828
Nursing care needs (%)						
Daily dressing	8	9	8	6	5	7
Injections	2	3	2	1	1	2
Bedfast	1	1	1	2	3	2
Complex appliances	1	1	3	1	1	1
Feeding	1	1	0	0	1	1
Other	7	5	7	35	37	18
More than one type	3	5	4	26	38	17
None of the above	77	76	76	28	15	53
Community nurse visits (%)						
Every day	4	2	3	0	0	2
2/3 times a week	7	4	4	0	0	3
Once a week	5	4	6	1	0	3
Less often	14	11	13	5	3	8
No	71	80	74	94	97	85

Note: 1. For each type of home the results are weighted to reflect the national distribution of that type of home. The data for all homes are also weighted to reflect the national distribution of home type.

Table 2.12: Nursing care by type of resident and type of funding

	<i>Permanent stay</i>		<i>Short stay</i>	
	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>
Number of residents (65+)	7843	2989	160	60
Nursing care needs (%)				
Daily dressing	7	7	8	5
Injections	2	2	2	2
Bedfast	2	1	1	2
Complex appliances	1	1	2	0
Feeding	1	0	4	0
Other	19	16	13	10
More than one type	18	18	12	12
None of the above	50	55	59	70
Community nurse visits (%)				
Every day	1	2	12	2
Every 2/3 days	2	3	10	11
Once a week	2	3	6	6
Less often	8	8	10	11
No	86	85	63	71

Note: 1. Data are weighted to reflect national distribution of home type.

Table 2.13: Measures of mental state by home type

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
Total number of residents (65+)	4884	2098	2914	2108	4168	16172
Cognitive impairment ² (%)						
Intact	28	33	35	23	14	26
Mild impairment	48	47	45	46	42	46
Severe impairment	25	21	20	31	44	28
Antisocial behaviour (%)						
Never/rarely	63	70	69	67	60	66
Sometimes	24	21	20	19	24	22
Frequently	13	9	11	14	16	12

Notes: 1. For each type of home the results are weighted to reflect the national distribution of that type of home. The data for all homes are also weighted to reflect the national distribution of home type.

2. The measure of cognitive impairment is based on the MDS Cognitive Performance Scale (Morris et al., 1994). The categories of the scale have been grouped into three groups to facilitate comparisons with information collected in the previous surveys: intact = intact (code 0); mild impairment = borderline intact (code 1), mild impairment (code 2) or moderate impairment (code 3); severe impairment = moderately severe impairment (code 4), severe impairment (code 5) or very severe impairment (code 6).

Table 2.14: Measures of mental state by type of resident and type of funding

	<i>Permanent stay</i>		<i>Short stay</i>	
	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>
Number of residents (65+)	8194	3155	170	66
Cognitive impairment (%)				
Intact	24	30	31	35
Mild impairment	47	43	48	51
Severe impairment	29	27	22	14
Antisocial behaviour (%)				
Never/rarely	65	70	67	80
Sometimes	22	22	20	17
Frequently	13	9	13	3

Note: 1. Data are weighted to reflect national distribution of home type.

Table 2.15: Age and gender of residents in residential and nursing homes for elderly people, 1981-96, by type of home

	<i>Local authority residential homes</i>			<i>Voluntary residential homes</i>			<i>Private residential homes</i>			<i>Nursing homes</i>	
	<i>1981</i>	<i>1988</i>	<i>1996</i>	<i>1981</i>	<i>1986</i>	<i>1996</i>	<i>1981</i>	<i>1986</i>	<i>1996</i>	<i>1986</i>	<i>1996</i>
Total number of homes	235	42	160	68	70	113	153	206	134	72	140
Total number of residents	10249	1683	5476	1678	1926	3664	2080	3048	2791	1662	5746
Sex distribution (%)											
Males	27	26	26	30	19	19	14	21	21	20	25
Females	73	74	74	70	81	81	86	79	79	80	75
Age group (%)											
Under 65	3	na	1	5	2	1	2	3	2	11	4
65-74	14	na	10	14	9	7	9	11	9	10	11
75-84	42	na	35	38	43	31	40	42	33	34	34
85 and over	40	na	54	43	47	60	49	43	56	44	51
Mean age											
Males	79	na	82	78	82	83	81	79	79	69	79
Females	83	na	85	84	84	86	84	83	86	82	84
Males and females	82	83	84	82	83	86	84	82	84	79	84

Table 2.16: Length of stay of permanent residents in residential and nursing homes for elderly people, 1981-96, by type of home

	<i>Local authority residential homes</i>			<i>Voluntary residential homes</i>			<i>Private residential homes</i>			<i>Nursing homes</i>	
	<i>1981</i>	<i>1988</i>	<i>1996</i>	<i>1981</i>	<i>1986</i>	<i>1996</i>	<i>1981</i>	<i>1986</i>	<i>1996</i>	<i>1986</i>	<i>1996</i>
Total number of homes	235	42	160	68	70	113	153	206	134	72	140
Total number of residents	10249	1683	5476	1678	1926	3664	2080	3048	2791	1662	5746
Length of stay (%)											
Under 1 year	28	31	28	23	24	23	39	43	28	34	33
1-2 years	19	19	20	14	19	19	22	26	18	21	19
2-3 years	14	14	14	11	15	14	15	15	13	15	16
3-4 years	9	9	10	9	9	11	10	7	11	10	11
4-5 years	8	7	6	8	7	8	5	3	8	5	7
5 years and over	22	19	22	34	27	26	10	6	22	15	15
Mean length of stay (mths)											
Males	38	na	37	53	43	40	19	20	38	34	27
Females	39	na	40	60	53	48	26	22	37	31	32
Males and females	39	na	39	58	51	46	25	22	37	32	31

Table 2.17: Source of admission of residents in residential and nursing homes for elderly people, 1981-96, by type of home

	<i>Local authority residential homes</i>			<i>Voluntary residential homes</i>			<i>Private residential homes</i>			<i>Nursing homes</i>	
	<i>1981</i>	<i>1988</i>	<i>1996</i>	<i>1981</i>	<i>1986</i>	<i>1996</i>	<i>1981</i>	<i>1986</i>	<i>1996</i>	<i>1986</i>	<i>1996</i>
Total number of homes	235	42	160	68	70	113	153	206	134	72	140
Total number of residents	10249	1683	5476	1678	1926	3664	2080	3048	2791	1662	5746
Source of admission (%)											
Hospital	34	30	18	8	12	16	26	32	24	40	46
Living alone	29	29	36	47	51	49	32	32	39	21	17
Living with others	18	19	23	17	17	13	18	14	13	16	14
Another home	12	11	11	9	9	11	17	15	15	18	19
Sheltered housing	4	8	10	6	3	10	1	3	7	2	4
Other/not known	3	2	2	13	8	1	6	4	2	2	<1

Table 2.18: Physical dependency characteristics of residents in residential and nursing homes for elderly people, 1981-96, by type of home

	<i>Local authority residential homes</i>			<i>Voluntary residential homes</i>			<i>Private residential homes</i>			<i>Nursing homes</i>	
	<i>1981</i>	<i>1988</i>	<i>1996</i>	<i>1981</i>	<i>1986</i>	<i>1996</i>	<i>1981</i>	<i>1986</i>	<i>1996</i>	<i>1986</i>	<i>1996</i>
Total number of homes	235	42	160	68	70	113	153	206	134	72	140
Total number of residents	10249	1683	5476	1678	1926	3664	2080	3048	2791	1662	5746
Mobility (%)											
Walk outdoors	30	24	18	50	45	23	31	36	27	15	6
Walk indoors, including stairs	7	8	9	9	8	12	12	11	15	8	4
Walk indoors on level	13	16	18	8	8	12	8	9	9	9	6
Walk indoors with aids	34	34	21	22	24	18	25	23	15	17	10
Walk indoors with help	9	9	10	6	6	9	13	12	14	17	14
Mobile in wheelchair	7	9	15	4	6	16	7	6	12	13	24
Chair or bedfast	<1	-	11	<1	3	10	3	4	8	21	36
Self-care tasks (% needing asst.)											
Wash face and hands	16	19	27	7	14	24	18	19	26	35	56
Bath or wash all over	77	73	86	45	61	79	69	66	78	79	92
Dress	26	30	43	13	21	36	30	32	42	55	80
Feed self	4	5	6	3	5	7	8	6	9	20	28
Use WC	17	22	32	8	16	25	23	25	31	49	74
Transfer (bed/chair)	18	21	27	10	16	22	25	23	27	49	70
Continence (%)											
Continent	60	53	49	83	72	58	59	61	58	43	25
Isolated incontinence	19	23	29	9	12	26	21	20	22	18	30
Urine incontinence	10	13	10	5	7	8	9	10	9	12	13
Faecal/double incontinence	11	11	12	3	9	9	11	9	11	26	32

Table 2.19: Measures of mental state of residents in residential and nursing homes for elderly people, 1981-96, by type of home

	<i>Local authority residential homes</i>			<i>Voluntary residential homes</i>			<i>Private residential homes</i>			<i>Nursing homes</i>	
	<i>1981</i>	<i>1988</i>	<i>1996</i>	<i>1981</i>	<i>1986</i>	<i>1996</i>	<i>1981</i>	<i>1986</i>	<i>1996</i>	<i>1986</i>	<i>1996</i>
Total number of homes	235	42	160	68	70	113	153	206	134	72	140
Total number of residents	10249	1683	5476	1678	1926	3664	2080	3048	2791	1662	5746
Confusion (%)											
Intact	45	41	28	72	62	35	50	52	32	42	14
Mild impairment	37	37	48	21	26	46	36	32	48	37	42
Severe impairment	19	21	25	7	12	19	14	16	20	21	44
Antisocial behaviour (%)											
Never/very unusual	70	62	63	87	88	70	79	77	70	76	60
Sometimes (>weekly)	22	26	24	12	10	20	17	18	21	19	24
Frequently (daily)	8	11	13	2	2	10	4	5	9	5	16
Anxiety (%)											
No evidence	41	34	39	59	61	43	55	52	49	52	39
Worries	37	41	38	30	26	37	31	32	35	30	36
Often apprehensive	10	10	10	6	7	11	8	9	8	9	11
Frequently tense	12	15	12	5	6	9	6	7	8	10	14
Depression (%)											
No evidence	57	54	58	72	71	59	70	68	65	62	56
Sadness	27	28	29	20	19	28	21	21	25	25	30
Sadness and weeping	10	12	9	5	6	9	6	8	6	8	10
Depression and guilt	5	6	4	2	4	4	2	3	4	5	4

Table 2.20: Measures of aggregate dependency of residents in residential and nursing homes for elderly people, 1981-96, by type of home

	<i>Local authority residential homes</i>			<i>Voluntary residential homes</i>			<i>Private residential homes</i>			<i>Nursing homes</i>	
	<i>1981</i>	<i>1988</i>	<i>1996</i>	<i>1981</i>	<i>1986</i>	<i>1996</i>	<i>1981</i>	<i>1986</i>	<i>1996</i>	<i>1986</i>	<i>1996</i>
Total number of homes	235	42	160	68	70	113	153	206	134	72	140
Total number of residents	10249	1683	5476	1678	1926	3664	2080	3048	2791	1662	5746
Index of ADL (Katz et al.) (%)											
A (No dependent functions)	21	na	13	54	38	20	28	31	20	16	6
B (1)	45	na	38	29	36	40	35	32	34	21	11
C (2)	12	na	14	5	7	12	10	9	13	8	7
D (3)	5	na	6	3	4	6	4	5	6	6	5
E (4)	5	na	12	2	4	9	5	8	11	11	23
F (5)	6	na	9	3	5	7	9	7	8	17	23
G (6)	3	na	4	2	4	4	5	4	6	15	22
Other (2-5, not C-F)	3	na	3	1	3	2	4	4	4	7	3
DHSS 4-category dependency (%)											
Minimal	25	na	14	59	45	22	34	33	23	15	5
Limited	36	na	29	22	26	29	29	26	25	18	8
Appreciable	11	na	16	7	9	18	10	11	17	14	11
Heavy	28	na	41	12	20	32	28	29	36	54	76

Table 2.21: Physical dependency characteristics of permanent residents in residential and nursing homes for elderly people, 1986-96, by type of home and type of funding

	<i>Private residential homes</i>				<i>Voluntary residential homes</i>				<i>Nursing homes</i>			
	<i>1986</i>		<i>1996</i>		<i>1986</i>		<i>1996</i>		<i>1986</i>		<i>1996</i>	
	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>
Total number of residents	1697	1126	1355	623	949	715	1206	567	895	544	1714	538
Mobility (%)												
Walk outdoors	37	34	29	24	43	44	23	26	12	11	6	6
Walk indoors, including stairs	11	13	15	15	8	9	10	16	9	8	4	4
Walk indoors on level	10	8	9	7	8	8	13	12	10	9	5	6
Walk indoors with aids	20	23	14	17	25	26	19	17	15	20	9	14
Walk indoors with help	12	11	13	14	5	7	9	8	16	19	15	13
Mobile in wheelchair	7	6	11	14	7	4	16	13	17	10	22	26
Chair or bedfast	4	5	8	10	3	2	10	8	21	22	40	32
Self-care tasks (% needing asst.)												
Wash face and hands	19	19	27	27	12	12	26	17	36	37	58	50
Bath or wash all over	63	69	78	81	63	59	80	76	81	84	92	91
Dress	31	34	43	42	22	19	37	31	57	56	81	78
Feed self	6	6	9	9	5	3	8	7	21	19	29	26
Use WC	25	26	31	32	18	13	29	17	52	49	75	71
Transfer	22	24	27	28	16	14	24	18	53	49	71	66
Continence (%)												
Continent	60	62	57	57	70	77	55	61	42	40	24	28
Isolated incontinence	20	20	22	22	15	10	28	25	18	20	28	32
Urine incontinence	11	10	9	11	6	7	8	8	12	14	13	13
Faecal/double incontinence	9	8	12	11	8	6	10	6	29	26	34	28

Table 2.22: Measures of mental state of permanent residents in residential and nursing homes for elderly people, 1986-96, by type of home

	<i>Private residential homes</i>				<i>Voluntary residential homes</i>				<i>Nursing homes</i>			
	<i>1986</i>		<i>1996</i>		<i>1986</i>		<i>1996</i>		<i>1986</i>		<i>1996</i>	
	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>
Total number of residents	1684	1123	1330	618	949	715	1181	565	892	543	1704	535
Confusion (%)												
Intact	50	53	31	35	60	64	31	42	40	42	13	15
Mild impairment	33	32	49	43	30	25	48	42	40	34	43	44
Severe impairment	17	15	20	22	10	11	20	16	20	24	44	41
Antisocial behaviour (%)												
Never/very unusual	74	83	68	72	87	91	68	76	76	78	59	63
Sometimes (>weekly)	20	15	22	20	10	8	22	16	19	17	24	26
Frequently (daily)	6	3	10	7	3	2	11	8	5	5	17	10
Anxiety (%)												
No evidence	50	54	50	49	60	67	40	47	50	55	39	37
Worries	33	32	34	35	30	22	38	35	33	26	36	38
Often apprehensive	9	9	8	7	8	7	13	8	7	9	11	12
Frequently tense	8	5	8	9	5	4	9	9	10	9	14	13
Depression (%)												
No evidence	68	70	65	66	69	76	57	63	61	63	55	56
Sadness	20	21	26	24	23	16	29	24	28	22	31	29
Sadness and weeping	8	6	5	8	5	5	11	7	8	9	10	10
Depression and guilt	4	2	4	3	5	2	3	5	4	6	4	4

Table 2.23: Measures of aggregate dependency of permanent residents in residential and nursing homes for elderly people, 1986-96, by type of home

	<i>Private residential homes</i>				<i>Voluntary residential homes</i>				<i>Nursing homes</i>			
	<i>1986</i>		<i>1996</i>		<i>1986</i>		<i>1996</i>		<i>1986</i>		<i>1996</i>	
	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>	<i>Public</i>	<i>Private</i>
Total number of residents	1676	1104	5396	1678	946	714	1200	568	892	544	1862	529
Index of ADL (Katz et al.) (%)												
A (No dependent functions)	34	28	20	17	35	40	20	23	15	13	6	8
B (1)	30	34	33	35	38	37	38	42	20	22	10	12
C (2)	8	10	13	13	8	7	12	12	8	9	6	8
D (3)	5	5	6	6	3	4	6	7	5	7	5	5
E (4)	8	9	11	10	5	3	10	5	12	11	23	24
F (5)	7	8	8	8	6	5	8	5	18	17	24	23
G (6)	4	3	6	7	3	2	4	4	16	14	23	18
Other (2-5, not C-F)	5	3	3	6	3	3	2	2	7	7	3	3
DHSS 4-category dependency (%)												
Minimal	35	32	23	19	42	48	20	29	13	13	5	6
Limited	24	27	24	26	28	26	28	29	17	20	8	9
Appreciable	11	11	17	17	10	9	17	17	14	15	11	14
Heavy	30	30	36	38	20	18	35	25	57	52	77	71

Chapter 3

Home Characteristics

3.1 Introduction

This chapter presents information on the characteristics of homes, including information on staff, drawn from the interview conducted with home managers. In addition, the chapter includes an analysis of the information collected from individual staff on the social climate of the home.

As explained in Chapter 1, the survey was designed to provide comparable information to that collected in previous surveys, in particular a survey of private and voluntary residential and nursing homes conducted in 1986 in 17 local authority areas in England, Scotland and Wales (Darton et al., 1989). A similar survey of local authority homes was undertaken by the Social Services Inspectorate (SSI) of the Department of Health in 1988 (Department of Health Social Services Inspectorate, 1989), although most of the comparable information collected in that survey relates to resident data. Brief descriptions of these surveys, and of an earlier survey of local authority, voluntary and private residential homes for elderly people conducted in 1981, are given in Chapter 1, and further details are contained in Appendix 1. Where possible, comparisons have been made between the information collected in the 1996 survey and the information collected in the previous surveys, as well as with other sources of information, in particular Laing's market surveys published by Laing and Buisson (1996, 1997).

The tables of information on home and staff characteristics which accompany this chapter have been prepared according to a common format. For each type of home, the data have been weighted to correspond to the national distribution of provision; and the figures given for all homes are based on a weighted combination of the figures for the individual types of home, in order to reflect the national distribution of different types of home. Details of the weighting procedure are given in Appendix 2. The numbers of homes shown in each table are the numbers of respondent homes which provided usable home-level data, after excluding one home which had a majority of residents aged under 65, with the exception of table 3.21. The numbers of homes shown in table 3.21, which presents information on the social climate of the home, are the numbers of homes which provided the information contained in the table.

3.2 Size of Homes

Table 3.1 shows the mean size of homes, in terms of the number of places, the range of home sizes, the distribution of the number of places and whether homes were planning to change the number of places during the following six months.

In the independent sector, nursing homes and dual registered homes were larger, on average, than residential homes, and voluntary residential homes were larger than private residential homes. The average size of local authority residential homes fell between that of voluntary residential homes and that of dual registered and nursing homes, although local authority homes tended to be concentrated in the 30-50 place range, whereas the sizes of voluntary residential homes, dual registered homes and nursing homes were spread more evenly over the range of sizes. Among private residential homes the sizes of homes were concentrated in the 10-25 place range, with over 30 per cent of homes falling into the 15-19 place range. Approximately two-thirds of places in dual registered homes were nursing places.

The relative sizes of homes are consistent with those reported by the Department of Health for 1996 and 1997 (Department of Health, 1997a), although the average sizes of private and voluntary residential homes in the survey were greater than in England as a whole, and the average size of dual registered homes in the survey was smaller than in England as a whole. For homes for elderly and elderly mentally infirm people in England at 31st March 1996 and at 31st March 1997, the average sizes were: 37 places in 1996 and 35 places in 1997 in local authority residential homes; 17 places in 1996 and 18 places in 1997 in private residential homes; 25 places in 1996 and 28 places in 1997 in voluntary residential homes; 43 places in 1996 and 48 places in 1997 in dual registered homes; and 37 places in 1996 and 36 places in 1997 in nursing homes.

Compared with the results of two surveys conducted in the mid-1980s, the average size of local authority homes has fallen and the average sizes of private residential homes and nursing homes have increased. Local authority homes had an average size of 44 places in 1988 (Department of Health Social Services Inspectorate, 1989), while in the survey conducted in 1986 (Darton and Wright, 1992), private residential homes had an average size of 17 places and nursing homes had an average size of 29 places. However, the average size of voluntary residential homes in the 1986 survey was the same as in the 1996 survey.

The reported plans for changes in the number of places in the surveyed authorities suggest that the trends in home sizes will continue. Local authority homes were slightly more likely to be planning to reduce their number of places (6 per cent) than to increase them (4 per cent), whereas independent sector homes were more likely to be planning to increase their number of places than to reduce

them. Approximately 10 per cent of private and voluntary residential homes and dual registered homes reported that they were planning to increase the number of places, while among nursing homes the proportion rose to 18 per cent.

3.3 Length of Ownership, Size of Organisation and Method of Acquisition of the Home

Table 3.2 shows the length of ownership, the size of the organisation running the home and the method of acquisition of the home for the independent sector homes in the survey.

The majority, over 70 per cent, of independent sector homes had been run by the present owners for over five years, and approximately one-third of homes had been run by the present owners for over ten years, although for voluntary residential homes this figure was nearly 60 per cent. The survey conducted in 1986 found that a much greater proportion of private sector residential and nursing homes had been acquired during the previous five years (Darton et al., 1989), and thus the findings from the 1996 survey suggest that the ownership of private sector homes has stabilised.

Ownership of private residential homes was concentrated among small organisations. Approximately 90 per cent of private residential homes were run by organisations which ran one or two homes, compared with about two-thirds of dual registered and nursing homes and half of the voluntary residential homes. In the survey conducted in 1986, private residential homes were more likely than private nursing homes to be run by a small organisation, although the difference between the two groups of homes was much less marked. Ninety-six per cent of private residential homes and 87 per cent of private nursing homes in the 1986 survey were run by organisations which ran one or two homes. The growth in the ownership of homes, particularly dual registered and nursing homes, by major providers, defined as those owning three or more homes, is shown in Laing's market surveys (Laing and Buisson, 1996, 1997): in 1988, 2.5 per cent of places in private residential homes, 22.7 per cent in private dual registered homes and 15.5 per cent in private nursing homes were in homes run by major providers; in 1996, the corresponding proportions were 7.5 per cent, 39.2 per cent and 37.4 per cent.

Most private residential, dual registered and nursing homes were either purchased as a going concern or started from scratch. The majority of homes transferred from local authority ownership were run as voluntary residential homes, accounting for 20 per cent of voluntary homes, and approximately 60 per cent of voluntary residential homes were started from scratch. In the 1986 survey, private residential homes were more likely to have been started from scratch than purchased as a going concern, whereas the reverse was the case for private nursing homes. Among nursing

homes, the increase in the proportion started from scratch, from 41 per cent in 1986 to 56 per cent in 1996, is likely to be related to the growth in ownership by major providers.

3.4 Original Function of the Building and Date of Construction

Table 3.3 shows the original function of the building used by the home and the date of construction of purpose-built homes.

Almost all of the local authority homes and just over half of the voluntary homes occupied purpose-built buildings, whereas the majority of private residential homes, dual registered homes and nursing homes occupied converted buildings. Very few private residential homes (8 per cent) occupied purpose-built buildings, but the proportion was larger in dual registered homes (20 per cent) and nursing homes (28 per cent). In the independent sector, the main type of building converted for use as a residential or nursing home was formerly a private residence, accounting for more than half of the converted homes in each case. In the 1986 survey, smaller proportions of independent sector homes occupied purpose-built buildings. The growth in the proportion of purpose-built homes among voluntary residential homes is likely to be related to the transfer of local authority homes to the voluntary sector, while the growth in the proportion of purpose-built homes among dual registered and nursing homes is likely to be related to the growth in ownership of these homes by major providers, noted above.

The majority of purpose-built local authority homes were built between 1960 and 1985 (75 per cent of all homes), and 10 per cent were built since 1985. Purpose-built voluntary residential homes were also more likely to have been built more than ten years before the survey, although the proportion built since 1985 was larger (18 per cent of all homes). Among private residential homes, dual registered homes and nursing homes, purpose-built homes were largely built since 1985, and this is likely to be related to the growth in ownership by major providers.

3.5 The Availability of a Lift and the Number of Storeys

Table 3.4 includes information on the availability of a lift and the number of storeys.

Among local authority homes, voluntary residential homes, dual registered homes and nursing homes, virtually all used one storey or provided a lift for residents, while for private residential homes the proportion was 89 per cent. This represents a substantial increase in provision in private sector homes compared with 1986, when approximately one-third of private residential and private

nursing homes had no lift and used more than one storey for residents. Among voluntary residential homes the scope for improvement in provision was less marked, since only 10 per cent of homes in the 1986 survey had no lift and used more than one storey for residents (Darton and Wright, 1992).

3.6 Bedroom Sizes and Facilities

Table 3.4 includes information on bedroom sizes and table 3.5 presents information on the facilities provided in bedrooms.

The 1973 DHSS Building Note for residential accommodation for elderly people (Department of Health and Social Security, 1973) recommended that most of the beds in residential homes for elderly people should be in single rooms, with a maximum of 20 per cent of beds in double rooms, and superseded the 1962 Ministry of Health Building Note, which indicated that at least 40 to 50 per cent of beds should be in single rooms, 30 to 40 per cent in double rooms, and no more than 10 to 20 per cent in four-bedded rooms (Ministry of Health, 1962). The Code of Practice for Residential Care (Centre for Policy on Ageing, 1984) stated that single rooms would normally be considered preferable to shared rooms and that special reasons should apply if more than two people occupied a room, and the updated version (Centre for Policy on Ageing, 1996) reinforced this by stating that all residents should have a single room unless they preferred otherwise. Two DHSS circulars issued in 1986 (Department of Health and Social Security, 1986a, 1986b) emphasised that the design recommendations related principally to new buildings, and indicated that no specific ratio of single to double rooms was appropriate in every case, although the second circular also reminded registration authorities of the recommendations in the 1984 Code of Practice concerning the occupancy of bedrooms by more than two people. There are no specific recommendations for bedroom sizes in nursing homes, but most health authorities are advising that most beds should be in single rooms (Laing and Buisson, 1997).

Local authority and voluntary residential homes had a greater proportion of beds in single rooms (89 per cent) than private residential homes (69 per cent) or dual registered and nursing homes (65 per cent). Laing and Buisson (1997) report similar figures for private residential and nursing homes surveyed in February 1997: 69 per cent of beds in private residential homes and 59 per cent of beds in private nursing homes were in single bedrooms. Dual registered and nursing homes also had a number of beds in rooms with three or more beds, whereas the beds in private and voluntary residential homes were in single or double rooms only. A small proportion of beds in local authority homes, less than one per cent, were in rooms with three beds. In relation to the 1973 Building Note standards, which specified a maximum of 20 per cent of beds in double rooms, 77 per cent of local

authority and voluntary residential homes met this criterion, compared with about 30 per cent of private residential homes, dual registered homes and nursing homes.

Compared with the 1986 survey, the provision of single bedrooms has increased substantially. Approximately 40 per cent of the beds in private residential and private nursing homes in the 1986 survey were in single bedrooms, and only 10 per cent of private residential homes and 7 per cent of private nursing homes met the criterion specified in the 1973 Building Note. Among voluntary residential homes in the 1986 survey, 58 per cent of beds were in single bedrooms and 35 per cent of homes met the 1973 Building Note criterion (Darton et al., 1989). Similar evidence for the improvement in levels of provision of single bedrooms is given in Laing and Buisson (1997).

The majority of homes, 88 per cent overall, provided washbasins in all bedrooms and, with the exception of a very small number of local authority and voluntary residential homes, all homes provided washbasins in at least some bedrooms. However, the provision of en suite showers or baths and en suite toilets was more prevalent in independent sector homes than in local authority residential homes. Few homes provided en suite showers or baths in all bedrooms, 3 per cent overall, but approximately 50 per cent of private residential homes and approximately 40 per cent of voluntary residential homes, dual registered homes and nursing homes provided these facilities in at least some bedrooms, compared with only 8 per cent of local authority homes. A higher proportion of homes provided en suite toilets, particularly in the independent sector, where between 60 and 70 per cent of homes provided en suite toilets in some bedrooms. However, the proportion of local authority homes with at least some bedrooms with an en suite toilet was not much greater than the proportion with some bedrooms with an en suite shower or bath. Laing and Buisson (1997) report that approximately one-third of beds in private residential and nursing homes included in their February 1997 survey were in bedrooms with an en suite toilet.

3.7 Group Living Arrangements and Sitting and Dining Facilities

Information on group living arrangements and sitting and dining facilities is presented in table 3.6.

Group living arrangements, in which the home is divided into smaller units for eating, sitting and sleeping, were much more prevalent in local authority residential homes than in independent sector homes. Over 50 per cent of local authority homes had bedrooms grouped with sitting and dining facilities, compared with between 10 and 20 per cent of independent sector homes. Private residential homes were less likely than other independent sector homes to be organised along group living lines, and this may reflect the smaller average size of private residential homes.

Local authority homes had larger numbers of sitting rooms and dining rooms than independent sector homes, as may be expected from the greater use of group living arrangements. Private residential homes tended to have fewer sitting rooms than other independent sector homes and, to a lesser extent, fewer dining rooms, as may be expected from their smaller average size. However, independent sector homes tended to have more sitting rooms and dining rooms than the homes in the 1986 survey. A single sitting room was provided in 44 per cent of private residential homes, 23 per cent of voluntary residential homes and 53 per cent of private nursing homes in the 1986 survey, and a further 4 per cent of private nursing homes had no sitting room. Few homes in the 1986 survey provided more than one dining room, and only 58 per cent of private nursing homes provided a dining room (Darton and Wright, 1992).

3.8 Occupancy Rates and Resident Turnover

Information on occupancy and turnover, relative to the number of places, is presented in table 3.7.

Short-stay residents, that is, those with a planned date of discharge, were more prevalent in local authority homes than in independent sector homes, accounting for approximately 11 per cent of the residents in local authority homes.

Occupancy rates tended to be higher in local authority and voluntary homes, at just over 90 per cent of places, than in the other independent sector homes, in which the mean occupancy rate ranged from 83 per cent to 87 per cent of places. These occupancy rates were lower than those found for independent sector homes in the 1986 survey, which recorded occupancy rates of 89 per cent for private residential homes and 93 per cent for voluntary residential homes and private nursing homes (Darton et al., 1989).

Turnover rates have been calculated as the ratio of the number of admissions during the previous 12 months to the number of places, and as the ratio of the number of discharges during the previous 12 months to the number of places. As may be seen from table 3.7, the ranges of admission and discharge rates were greater for independent sector homes than among local authority homes, the maximum admission rate exceeding 100 per cent for all types of independent homes. Twenty independent sector homes had admission rates exceeding 100 per cent, and five of these homes had discharge rates exceeding 100 per cent. These homes have been excluded from the calculation of mean admission and discharge rates. Turnover rates were larger for dual registered and nursing homes than for residential homes. Among residential homes, mean truncated admission rates were just under 30 per cent, and among dual registered and nursing homes, mean truncated admission rates were over 40 per cent. Among residential homes, mean discharge rates, including deaths,

were slightly lower than mean admission rates, but among dual registered and nursing homes the discrepancies between mean admission rates and mean discharge rates were pronounced. Discrepancies between admission rates and discharge rates have been found in previous studies (Darton, 1994b). Although admission rates would be larger than discharge rates in new or expanding homes, it is likely that deaths and discharges will tend to be under-recorded, compared with admissions.

3.9 Policy on Admissions and Retention of Residents

Table 3.8 shows the type of care provided by homes and the policy on admissions and retention of individuals with particular care needs.

Although the proportion of short-stay residents was higher in local authority residential homes than in independent sector homes, more than 90 per cent of homes in each category of home except voluntary residential homes provided short-term care. Local authority homes were also more likely to provide care for elderly people with mental health problems or learning disabilities. As noted in Chapter 1, the survey included residential and dual registered homes for elderly people and elderly people with mental illness, and nursing homes for elderly people. Nursing homes which catered for elderly people with mental illness, but which were recorded simply as for people with mental illness in the database used for selecting the sample, were not included in the survey, and thus the level of provision of care for such individuals may be underestimated. However, previous studies of private residential homes and nursing homes have indicated that individuals with behavioural problems and, to a lesser extent, confusion, tend to be considered unsuitable for admission (Challis and Bartlett, 1987; Phillips et al., 1988). As may be expected, dual registered homes and nursing homes were more likely than residential homes to provide medical and nursing care, although approximately two-thirds of residential homes provided rehabilitative care, and a similar proportion reported providing terminal care, while over two-fifths provided post-operative/convalescent care.

Independent sector homes were more likely to refuse to admit elderly people with behavioural or psychological problems than local authority homes, as may be expected from the information on the type of care provided. Among local authority homes, 20 per cent did not admit elderly people with behavioural problems and 27 per cent did not admit elderly mentally infirm people, whereas for all homes the proportions were 41 per cent and 49 per cent respectively. However, 75 per cent of local authority homes did not admit sectioned patients, compared with 82 per cent of homes overall. Among all homes, 8 per cent did not admit elderly people with incontinence, the proportion being greater in private residential homes (11 per cent) and in voluntary residential homes (8 per cent) than

in the other types of home, and approximately 80 per cent of residential homes did not admit elderly people who required nursing.

Although dual registered homes and nursing homes cater for residents with greater levels of disability than residential homes, they were less likely to report that they would continue to provide care if residents developed further problems once they had been admitted. Private residential homes were less likely to require residents to leave than the other types of home. Five per cent of private residential homes stated that such residents were usually or always required to leave, compared with approximately 20 per cent of the other types of home.

3.10 Additional Services and Specialist Equipment Provided for Residents

Tables 3.9a and 3.9b present details of additional services provided to residents and the method of payment, and table 3.10 presents details of specialist equipment and transport.

Dual registered homes and nursing homes were more likely than residential homes to include additional medical services to residents in their standard fees. The majority of dual registered and nursing homes included incontinence supplies in their standard fees, whereas among private and voluntary residential homes similar proportions of homes included incontinence supplies in their standard fees or obtained them from the National Health Service. Local authority homes were twice as likely to obtain incontinence supplies from the NHS as to include their cost in the standard fees of the home. The NHS was the principal source of finance for other medical services in residential homes, with the exception of chiropody provided in private residential homes, and made a substantial contribution to the finance of medical services in dual registered and nursing homes, but dual registered and nursing homes were more likely than residential homes to include these services in their standard fees, as noted above.

Charging arrangements for other services were more uniform across the different types of home. The cost of laundry was almost always included in the standard fee, and dry cleaning was included in the standard fee by approximately 30 per cent of homes, although local authority residential homes were more likely than the other types of home to include this in the standard fee. In dual registered and nursing homes, residents were less likely to make private arrangements for payment for hairdressing, and more likely to pay via their fees, either in the standard fee or as an extra payment. Nursing homes, and, to a lesser extent, private residential homes and dual registered homes, were more likely to include the cost of a telephone in the resident's room within the standard fee or as an extra to the fee, than local authority and voluntary residential homes.

Over three-quarters of homes provided special baths and hoists for residents and approximately 50 per cent provided special beds, although approximately 80 per cent of dual registered and nursing homes provided special beds. Approximately one-quarter of dual registered and nursing homes also provided special mattresses.

Overall, 43 per cent of homes had access to a minibus for residents, but the proportion was greater for local authority homes than for independent sector homes due to the greater availability of a community or local authority bus. Approximately 30 per cent of each type of home had access to a minibus dedicated to the home or shared with other homes.

3.11 Activities Arranged for Residents

Table 3.11 presents details of the organisation of activities for residents and the types of activities arranged relatively frequently, that is, at least weekly or monthly.

Nearly all homes (96 per cent) organised an activity programme for residents. In most cases the programme was organised by one or more members of staff, although in 14 per cent of homes the programme was organised by an outside volunteer or professional not employed by the home. Voluntary residential homes, dual registered homes and nursing homes were more likely to assign the responsibility for organising the programme to a specific member of staff than local authority and private residential homes, whereas in local authority and private residential homes a number of staff were more likely to share the responsibility.

In general, private homes tended to be less likely to organise activities for residents than homes overall and there were variations between the different types of home in the proportions organising particular activities. However, the overall pattern of activities was quite similar across the different types of home.

3.12 Services Provided for Non-Residents

Table 3.12 summarises information collected about services provided for non-residents of the home.

Local authority homes were much more likely to provide services to non-residents than independent sector homes. In all types of home, day care was the main service provided to non-residents, and bathing services were the next most frequently reported. Overall, 42 per cent of homes provided day care to non-residents, ranging from 24 per cent of nursing homes to 87 per cent of local

authority homes. In comparison, Laing and Buisson (1997) report that 47 per cent of private residential homes and 34 per cent of private nursing homes surveyed in February 1997 provided day care.

Local authority homes also provided meals on wheels, laundry services and bathing services in approximately 40 per cent of cases, and 21 per cent of local authority homes provided home care for people living in their own homes. In the independent sector, voluntary residential homes were more likely to provide services to non-residents than the other types of home, and voluntary residential homes were more likely to provide associated sheltered housing or close care than local authority homes or other independent sector homes. Approximately 20 per cent of voluntary residential homes provided sheltered housing or close care, which consists of independent units of accommodation which can receive services provided by the residential or nursing home (Laing and Buisson, 1997), compared with 15 per cent of dual registered homes and less than 10 per cent of the other types of home.

3.13 Proprietorial Involvement in Running Private Homes

Table 3.13 shows the distribution of the number of proprietors reported as working in private residential, dual registered and nursing homes, and the reported number of hours worked by the proprietors. The figures on the number of hours worked by proprietors are based on the mean number of hours worked per home.

As has been found in previous studies (Weaver et al., 1985; Challis and Bartlett, 1987; Phillips et al., 1988; Darton et al., 1989), the majority of homes operated with one or two proprietors. The proportions of homes which reported that there were no proprietors working in the home are consistent with the figures on ownership of homes presented in section 3.3, above.

The reported number of hours worked by proprietors ranged up to nearly 100 hours per week in private residential and nursing homes and up to 65 hours per week in private dual registered homes. Overall, proprietors were reported as working for an average of 45 hours per week in private residential homes, for 31 hours per week in private dual registered homes, and for 37 hours per week in private nursing homes.

3.14 Staffing Levels

Table 3.14 shows the mean and median number of care staff, including supervisory and nursing staff, and the mean and median number of other staff who worked full time or part time, full time being defined as 30 hours or more per week. Table 3.15 shows mean estimated staffing ratios for care staff, based on the assumption that full time staff worked 35 hours per week and that part time staff worked 15 hours per week.

Comparing the mean number of staff with the mean number of places shown in table 3.1 indicates that residential homes had approximately one full time member of the care staff for every three places and approximately one part time member of the care staff for every 2.5 places. Dual registered and nursing homes had higher levels of full time staffing, with one full time member of staff for just over every two places, but similar levels of part time staffing as in residential homes. Although private residential homes tended to have lower levels of staffing by other staff relative to the average home size, including other staff with care staff in these calculations had little effect on the relative staffing levels in the different types of home.

For residential homes, mean estimated staffing ratios for care staff ranged from 22 to 24 hours per place per week, compared with about 30 hours per place per week in dual registered and nursing homes. The difference between mean estimated staffing ratios for residential homes and for dual registered and nursing homes was greater when staffing ratios were calculated in relation to residents, due to the lower average levels of occupancy in dual registered and nursing homes, as shown in table 3.7. Including the time of proprietors in the calculation of staffing ratios for private homes increased the mean estimated staffing ratio for private residential homes by five hours per week, from 22 to 27 hours per place per week, but the difference was smaller for private dual registered and private nursing homes, reflecting the lower level of proprietorial involvement in these homes.

For the survey conducted in 1986, staffing ratios were computed from the number of hours worked by staff per week, and included ancillary staff. Excluding the contribution of proprietors in private homes, private and voluntary residential homes had similar levels of staffing, 23 hours per place in private homes and 21 hours per place in voluntary homes, while the figure for private nursing homes was 34 hours per place (Darton et al., 1989). In the 1986 survey, ancillary staff accounted for 13 per cent of the whole time equivalent staff of private residential homes, including the proprietors, and for 18 per cent of the whole time equivalent staff of private nursing homes. For voluntary residential homes, ancillary staff accounted for 30 per cent of the whole time equivalent staff. In the 1988 survey of local authority homes conducted by the Department of Health Social Services Inspectorate (1989), the overall staffing ratio per resident was recorded as 21.5 hours per week,

although, after excluding manual staff, the figure was only 15.1 hours per resident per week. Since the staffing ratios reported for the previous surveys include ancillary staff, average staffing ratios for care staff appear to have increased significantly between the surveys conducted in 1986 and 1988 and the 1996 survey, particularly among local authority and voluntary residential homes. The smallest increase in average staffing ratios, of approximately two hours per place per week, would appear to have occurred among private residential homes.

3.15 Availability of Care Staff During the Day

Table 3.16 presents information on the availability of supervisory staff, including home managers and proprietors, and care staff, during four different periods during the day on which the interview was conducted.

The majority of homes had one or two supervisory staff on duty in the morning and the afternoon. In the evening, almost all local authority homes had one member of the supervisory staff on duty but in the independent sector most homes had either no member or one member of the supervisory staff on duty. At night, the majority of homes, particularly private and voluntary homes and dual registered homes, had no member of the supervisory staff on duty. Local authority residential homes had one member of the supervisory staff on duty at night in 42 per cent of cases, and in nursing homes the corresponding figure was 34 per cent. Private residential homes were more likely to have two members of the supervisory staff on duty during the evening (19 per cent) and at night (11 per cent) than the other types of home, and this is likely to be related to the greater involvement of owner managers in private residential homes.

Levels of staffing by care and nursing staff were greatest during the morning, and decreased slightly in the afternoon and then again in the evening, in all types of home. At night, all dual registered homes and nursing homes had at least one member of staff on duty, and the majority had at least three staff on duty, while private residential homes had the lowest average number of staff on duty at night, 51 per cent having one member of staff on duty at night. Among local authority and voluntary residential homes the majority of homes had two staff on duty at night.

3.16 Methods used to Cover for Sickness among Care Staff

Table 3.17 shows the principal method used by homes to cover for sickness among care staff and the proportion of homes using each method. Since each home may use more than one method, the percentages shown for all methods do not total 100 per cent.

The main method used to cover for staff sickness, employed in 72 per cent of homes overall, involved other staff working additional hours. Among private residential homes this was the main method used by 83 per cent of homes. The next most frequently used single method was to have relief staff on call, although the extent to which this was used varied between the different types of home. Approximately one-third of local authority and voluntary residential homes used relief staff on call as the main method for covering for staff sickness, but this was less important in the other types of home. Dual registered homes and nursing homes reported a wider range of methods than residential homes as the main method for covering for staff sickness, but all types of home used a range of methods in addition to the main method.

3.17 Staff Qualifications

Table 3.18 shows the extent to which homes employed staff with relevant qualifications, and the ratio of the number of staff with nursing qualifications to the number of places in the home, expressed as a percentage.

Among residential homes, approximately 50 per cent had at least one member of staff with nursing qualifications. Local authority homes were less likely to employ one or more qualified nurses, but 55 per cent employed one or more qualified social workers, whereas the proportion of private and voluntary residential homes with qualified social workers was approximately 20 per cent. Approximately 20 per cent of dual registered and nursing homes had staff who were working towards nursing qualifications. Other relevant qualifications included NVQs and BTEC awards and were held by staff in approximately two-thirds of homes. A slightly greater proportion of homes reported that members of staff were working towards such qualifications, the difference being due mainly to higher proportions of dual registered and nursing homes reporting that staff were working towards these qualifications than that staff had received them.

The information on the ratio of the number of staff with nursing qualifications to the number of places provides an indication of the intensity of nursing provision within homes. Dual registered and nursing homes had the equivalent of just over one nurse for every four places, private residential homes had the equivalent of one nurse for every ten places and local authority and voluntary homes had the equivalent of one nurse for every 20 places.

3.18 Staff Training

Table 3.19 shows the types of staff training carried out during the six months prior to the survey and reports on the extent to which homes had trained workplace NVQ assessors on their staff. Since more than one type of training may have been used in each home, the percentages shown do not total 100 per cent.

In-house training had been employed by 97 per cent of homes, staff from 83 per cent of homes had attended external courses and 69 per cent of homes had brought an outside expert into the home. Local authority residential homes, dual registered homes and nursing homes were more likely than private residential and nursing homes to employ an outside expert or to send staff on external courses, although approximately 75 per cent of private and voluntary residential homes sent staff on external courses. In addition, approximately one-third of dual registered and nursing homes reported that staff had followed a distance learning programme.

3.19 Volunteer Help in the Home

Table 3.19 includes information on the extent to which volunteers provide help in the home.

Volunteer help was most prevalent in local authority and voluntary residential homes, being provided at least occasionally in just over 60 per cent of these homes. Volunteers provided help at least weekly in 50 per cent of local authority residential homes and in approximately 40 per cent of voluntary residential homes. The corresponding figure for dual registered homes and nursing homes was 25 per cent. Private residential homes were least likely to receive help from volunteers. Only one-third of private residential homes received any help from volunteers and only about 12 per cent received help at least weekly.

3.20 Social Climate of Homes

3.20.1 Introduction

Quality of the caring environment is notoriously difficult to measure, especially in the context of a large survey. But it is of fundamental importance when considering residential-based care, which, by its very nature, dominates the life of any individual who becomes a resident. Factors such as proportion of single rooms and existence of specific facilities give us an insight into the quality of the physical environment. Measures of policies and practice can provide some information about the ethos of an organisation. But from the perspective of the individual resident it will be the social

climate or atmosphere of the home: the way the ethos works out in practice and the degree to which physical facilities are put to active use, that will most directly affect his or her quality of life.

3.20.2 Sheltered Care Environment Scale

The Sheltered Care Environment Scale (SCES) has been developed in the USA as part of the Multiphasic Environmental Assessment Procedure (MEAP) (Moos and Lemke, 1994). The procedure describes and evaluates congregate living environments for older people and has been used in a number of studies in the UK (Benjamin and Spector, 1990; Netten, 1993; Schneider and Mann, 1997; Mozley et al., 1998). The objective of the SCES element of the procedure is to identify the social climate based on respondents' subjective appraisal of the facility. The social climate of the facility is related to but differs from the caring regime or other indicators of quality of care. For example, a home may have policies that enable residents to participate in decision making (such as running a residents' committee) but whether residents have much influence will depend on whether preferences and opinions are taken into consideration in decision making. The Resident Influence sub-scale of the SCES measures the degree to which respondents feel that residents' preferences are actually taken on board rather than whether formal systems for doing so are in place.

The SCES consists of 63 yes/no items which are used to derive seven sub-scales. Table 3.20 summarises the sub-scales which cover relationships within the home, personal growth and the way the home is maintained and changed. Relationships are reflected through Cohesion (how supportive staff and residents are of residents) and Conflict (the degree to which anger and criticism are expressed). Encouragement of personal growth is measured through Independence (how self-sufficient residents are encouraged to be) and Self-disclosure which taps how openly concerns and worries are discussed. System maintenance and change is measured through Organization (importance of order, regularity and routine and clarity of rules and procedures); Resident Influence (degree to which residents can affect procedures and policies); and Physical Comfort (level of comfort, pleasantness of decor and sensory satisfaction).

The sub-scales are always presented individually and represent the summarised version of the views of a number of observers of the home. Respondents can be residents, staff or visitors to the home. The items can be framed to identify: real social climate, what is seen to be occurring in the home; ideal, what they would like to see; and expected, what they anticipate a home being like.

In the survey up to 20 staff in each home were asked to complete the real scale. Staff were eligible to complete the questionnaire if they were care, supervisory or came into regular contact with residents, unless they only worked at night. Analysis in the USA has suggested that results are reliable indicators of overall ratings if at least five staff responses have been obtained (Moos and

Lemke, 1992). In order to ensure that small homes, where it may not be possible to identify five relevant staff members, were included, three staff responses were taken as sufficient (see below for a discussion about the implications of this).

3.20.3 Results

In total, 7474 staff completed questionnaires. There were three or more valid responses from 601 homes with, on average, between 11 and 12 respondents per home. The number of homes where there was a low number of respondents (between three and five) varied depending on the sub-scale. Resident Influence had the highest non-response rate and, for this, 37 of the 601 homes provided between three and five valid responses.

The scores for those homes where there were between three and five responses were compared with homes with higher numbers of respondents to identify whether there were any systematic differences. There was a significant difference in the Conflict, Independence, Organization and Physical Comfort sub-scales. But these scores were also associated with size of home. Once this factor had been allowed for no significant difference remained. Clearly more work is needed before we can be confident that the results for small homes are accurate indicators of social climate. However, this evidence suggest that at present it is reasonable to include these homes in the presentation of overall results.

Table 3.21 shows the scores for each sub-scale by home type. There were significant differences in the social climate reported in each type of home. Local authority homes had significantly lower reported levels of Cohesion, Independence, Organization and Physical Comfort, and higher levels of Resident Influence and Conflict than other homes. Private residential homes had significantly higher levels of Cohesion, Independence, Organization and Physical Comfort than all other types of home. Nursing homes had significantly lower levels of Independence, Resident Influence, and Self-disclosure than independent residential homes. Voluntary managed residential and dual-registered homes did not differ significantly from other homes on any of the sub-scales.

There is clearly a concern when reporting such differences that what is being reflected is more about staff expectations than what is happening in the home. For example, does the reporting of higher Physical Comfort in private residential homes reflect a lower level of expectation amongst staff in the private sector than in the local authority sector? The issue of whether the results reflect more about the individual than the setting on which they are reporting have been the subject of analyses in the USA (Moos and Lemke, 1994). These found that the single best predictor of an individual's SCES scores is the group's perception of the particular facility, with individual staff characteristics doing very little to improve the prediction. Further work is need to investigate whether this finding holds in the survey homes.

Assuming that the findings reported in table 3.21 are genuine differences in social climate, these results beg the question whether the differences are due to inherent characteristics of the sectors or characteristics of the homes themselves and/or the nature of residents in the homes. For example, it would be expected that size of home would affect the overall social climate and smaller homes are more prevalent in the private residential sector. Smaller homes (ten places or less) are associated with significantly higher Cohesion, lower Conflict, higher Independence, higher Organization and higher Physical Comfort scores. But this is also true within the private residential sector and the relationship between private residential homes and social climate holds when small homes are excluded. This would suggest both size and sector are important influences on social climate. Other factors, such as multiple use of homes, where homes provide a variety of services for non-residents, appear initially to be associated with lower Cohesion, higher Conflict and lower Independence. But once sector is taken into account (multiple use of homes is highly associated with local authority managed homes) the differences disappear. There are many other factors that warrant investigation. For example, is the level of Independence related to the dependency of residents, in particular the level of cognitive impairment? If so it may go some way to explaining the lower levels of Independence found in local authority managed homes.

It is not possible here to investigate in detail the relationship between social climate and home characteristics. Clearly multivariate analyses are needed to tease out important factors and to generate hypotheses about directions of causation. This would appear a very worthwhile exercise given that the social climate as measured by the SCES is likely to have a profound effect on the quality of residents' lives and, as reported in Chapter 4, is associated with the costs of providing care.

Table 3.1: Size of home by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
<i>Number of places</i>						
Mean	35.0	20.0	30.3	39.2	37.7	27.5
Minimum	12	6	8	9	9	6
Maximum	66	56	100	77	180	180
<i>Number of residential places</i>						
Mean	-	-	-	13.1	-	-
Minimum	-	-	-	2	-	-
Maximum	-	-	-	52	-	-
<i>Number of nursing places</i>						
Mean	-	-	-	27.6	-	-
Minimum	-	-	-	4	-	-
Maximum	-	-	-	65	-	-
<i>Number of places (%)</i>						
4-9	0	8	5	1	<1	5
10-14	2	18	0	3	3	11
15-19	4	31	16	0	4	19
20-24	11	19	14	9	10	16
25-29	7	9	10	20	23	13
30-39	45	8	30	21	22	18
40-49	25	4	20	22	19	12
50 or more	7	2	4	24	19	8
<i>Planned changes in places (%)</i>						
Increase number	4	9	10	11	18	11
No change	90	91	87	85	78	87
Decrease number	6	0	3	4	4	2

Table 3.2: Length of ownership, size of organisation and method of acquisition of home by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
<i>Length of ownership (%)</i>						
Under 1 year	-	7	0	8	8	7
1-2 years	-	6	3	7	6	6
2-3 years	-	2	3	7	6	4
3-4 years	-	3	3	4	11	5
4-5 years	-	3	7	4	8	5
5-10 years	-	42	25	41	34	39
10 years and over	-	37	59	30	28	37
<i>Number of homes owned by organisation (%)</i>						
1	-	78	43	53	58	69
2	-	11	7	13	11	11
3-5	-	6	3	17	16	9
6-10	-	1	12	7	3	3
11-20	-	2	18	4	1	3
More than 20	-	1	16	5	11	5
<i>Method of acquisition (%)</i>						
Building inherited/donated	-	1	7	5	0	2
Home inherited/donated	-	1	6	1	2	2
Home transferred from local authority	-	1	21	4	2	3
Home purchased as going concern	-	60	3	43	37	49
Started from scratch	-	33	59	43	56	41
Other	-	3	4	4	4	3
Not known	-	1	0	1	1	<1

Table 3.3: Original function of building and date of construction by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
<i>Original function of building (%)</i>						
Purpose-built home	93	8	53	20	28	25
Private residence	2	50	30	42	45	42
Hotel	0	16	4	11	9	11
Hostel	1	2	3	3	0	2
Other	2	18	8	21	14	15
Not known	1	7	2	4	4	5
<i>Date of construction (%)</i>						
Since 1985	10	5	18	16	24	11
1960-1985	75	1	27	3	1	11
1940-1959	6	0	3	0	0	<1
Before 1940	1	1	4	1	1	1
Date not known	1	0	1	0	3	<1
Not purpose built/not known	7	93	47	80	72	75

Table 3.4: Facilities provided by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
<i>Lift and number of storeys (%)</i>						
Lift available	74	83	84	96	89	84
No lift, 1 storey	25	5	13	3	9	9
No lift, more than 1 storey	<1	11	3	1	3	7
<i>Bedroom sizes (% of beds)</i>						
Single	89	69	89	65	65	74
Double	11	31	11	32	31	25
3 beds	<1	0	0	2	3	1
4 beds	0	0	0	<1	<1	<1
5 or more beds	0	0	0	<1	<1	<1
<i>Bedrooms and building note standards (%)</i>						
Meets 1973 BNS	77	31	77	30	29	39
Meets 1962 BNS only	19	42	20	28	22	33
Below both BNS	5	28	3	42	49	29

Table 3.5: Bedroom facilities by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
En suite shower or bath (%)						
All bedrooms	2	3	7	3	2	3
Some bedrooms	6	47	30	37	38	38
No bedrooms	92	51	62	60	60	59
En suite toilets (%)						
All bedrooms	4	12	20	13	9	11
Some bedrooms	11	57	43	51	57	50
No bedrooms	86	32	38	36	34	39
Washbasins (%)						
All bedrooms	89	86	93	92	86	88
Some bedrooms	10	14	7	8	14	12
No bedrooms	1	0	<1	0	0	<1

Table 3.6: Group living arrangements and sitting and dining facilities by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
<i>Group living arrangements (%)</i>						
Bedrooms with sitting and dining facilities	54	10	19	14	20	17
Bedrooms with sitting facilities only	10	4	5	5	4	5
Sitting and dining facilities not grouped	34	85	73	81	76	76
Other	2	2	3	0	0	2
<i>Sitting room provision (%)</i>						
No sitting room	0	0	0	0	2	<1
1 sitting room	1	24	9	9	13	17
2 sitting rooms	5	41	30	26	30	33
3 sitting rooms	7	22	21	29	26	22
4 sitting rooms	20	7	19	21	18	13
5 or more sitting rooms	66	5	21	15	11	15
<i>Dining room provision (%)</i>						
No dining rooms	1	1	0	1	5	2
1 dining room	30	81	65	61	54	67
2 dining rooms	22	13	17	25	31	19
3 dining rooms	14	3	6	8	5	5
4 dining rooms	19	1	7	4	4	4
5 or more dining rooms	16	1	6	1	2	3

Table 3.7: Occupancy and turnover by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
Number of places						
Mean	35.0	20.0	30.3	39.2	37.7	27.5
Minimum	12	6	8	9	9	6
Maximum	66	56	100	77	180	180
Number of residents						
Mean	32.0	16.9	28.0	32.5	32.6	23.7
Minimum	11	4	3	3	8	3
Maximum	60	53	95	73	174	174
Number of permanent residents						
Mean	28.4	16.7	27.3	31.8	32.1	23.0
Minimum	10	3	3	3	8	3
Maximum	53	52	95	72	170	170
Number of short-stay residents						
Mean	3.7	0.2	0.7	0.7	0.5	0.7
Minimum	0	0	0	0	0	0
Maximum	18	4	12	6	10	18
Occupancy (% of places)						
Mean	91.0	85.0	90.5	82.6	87.1	86.3
Minimum	55	29	38	4	26	4
Maximum	100	100	100	100	100	100
Admissions of permanent residents (% of places)						
Mean ¹	28.7	29.9	26.2	44.8	42.9	33.1
Minimum	0	0	0	10	0	0
Maximum	71	123	117	253	213	253
Discharges and deaths of permanent residents (% of places)						
Mean ¹	26.5	26.4	23.4	33.7	32.9	28.0
Minimum	0	0	0	8	4	0
Maximum	60	75	83	133	130	133

Note: 1. Admission rate truncated to 100%.

Table 3.8: Policy on admissions and retention of residents by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
Type of care provided (%)						
Short-term care	98	91	80	95	94	92
Care of elderly people with mental health problems	89	77	73	53	63	73
Care of a particular ethnic or religious group	82	74	78	83	74	76
Rehabilitative care	70	70	63	83	76	71
Care for older people with learning disabilities	73	48	44	36	40	48
Terminal care	66	59	67	88	92	69
Consultant supervised post-operative/convalescent care	38	48	48	61	64	51
Other specialist care	19	17	19	27	35	22
Particular type of care not admitted (%)						
Behavioural problems	20	42	50	51	40	41
Incontinence	3	11	8	1	2	8
Nursing care	85	77	81	1	1	58
Sectioned patients	75	79	87	83	91	82
Elderly mentally infirm	27	44	55	71	66	49
Other	4	1	3	4	3	2
None	6	4	6	8	11	6
Policy for dealing with above problems if developed (%)						
Provide care if at all possible	59	78	63	54	54	68
Usually leave, but exceptions are made	11	4	16	9	8	7
Always leave	9	1	1	11	13	5
No set policy	4	5	3	9	8	6
Other	11	8	12	9	6	8
Admit all types of care	6	4	6	8	12	6

Table 3.9a: Charging arrangements for medical services provided to residents by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
<i>Services provided for residents (%)</i>						
<i>Incontinence supplies</i>						
Included in standard fees	32	39	43	86	93	54
Charged as an 'extra' within gross fees	0	0	<1	0	4	<1
Purchased by resident from outside	<1	<1	3	1	3	1
Provided by NHS	58	41	39	5	0	32
Provided by the local authority	10	19	14	8	1	13
<i>Physiotherapy</i>						
Included in standard fees	14	25	24	37	46	29
Charged as an 'extra' within gross fees	0	2	<1	3	7	3
Purchased by resident from outside	0	5	4	9	7	5
Provided by NHS	80	62	67	48	37	59
Provided by the local authority	6	6	4	4	3	5
<i>Chiropody</i>						
Included in standard fees	9	12	15	26	19	14
Charged as an 'extra' within gross fees	<1	10	0	12	14	9
Purchased by resident from outside	17	48	30	47	41	42
Provided by NHS	68	27	45	14	22	31
Provided by the local authority	6	3	11	1	3	4
<i>Opticians</i>						
Included in standard fees	2	5	6	12	13	7
Charged as an 'extra' within gross fees	1	3	0	3	3	2
Purchased by resident from outside	22	24	34	18	27	25
Provided by NHS	72	67	58	62	55	64
Provided by the local authority	3	<1	2	5	3	2
<i>Special equipment</i>						
Included in standard fees	12	28	15	43	40	29
Charged as an 'extra' within gross fees	0	0	<1	0	<1	<1
Purchased by resident from outside	<1	0	3	1	3	<1
Provided by NHS	64	54	59	45	40	52
Provided by the local authority	24	18	23	11	17	18

Table 3.9b: Charging arrangements for additional services provided to residents by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
Services provided for residents (%)						
Laundry						
Included in standard fees	91	100	100	100	99	99
Charged as an 'extra' within gross fees	0	0	0	0	1	<1
Purchased by resident from outside	9	0	0	0	0	<1
Provided by NHS	0	0	0	0	0	0
Provided by the local authority	0	0	0	0	0	0
Dry cleaning						
Included in standard fees	42	29	24	31	26	30
Charged as an 'extra' within gross fees	4	17	4	13	14	14
Purchased by resident from outside	51	54	72	56	60	57
Provided by NHS	0	0	0	0	0	0
Provided by the local authority	3	0	0	0	0	<1
Hairdressing						
Included in standard fees	1	5	3	12	15	7
Charged as an 'extra' within gross fees	9	14	11	17	25	16
Purchased by resident from outside	90	81	87	71	59	77
Provided by NHS	0	0	0	0	0	0
Provided by the local authority	0	0	0	0	<1	<1
Phone in room						
Included in standard fees	1	5	4	5	7	5
Charged as an 'extra' within gross fees	9	15	6	13	18	15
Purchased by resident from outside	90	78	90	82	75	80
Provided by NHS	0	1	0	0	0	<1
Provided by the local authority	0	0	0	0	0	0

Table 3.10: Specialist equipment and transport provided for residents by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
Specialist equipment for the general use of residents (%)						
No specialist equipment	1	7	3	0	0	4
Special baths	89	62	88	79	81	72
Special beds	41	39	50	78	84	53
Hoists	99	70	84	99	99	83
Special mattresses	4	8	5	26	23	12
Special chairs	2	0	3	12	6	3
Toilet aids	5	11	7	4	2	8
Lifting aids (other than hoists)	13	2	8	13	11	6
Wheelchairs	20	23	29	24	15	21
Zimmer frames	7	7	9	8	3	6
Other specialist equipment	24	20	26	34	29	24
Minibus used for the residents (%)						
Yes, just for this home	18	20	12	26	16	19
Yes, shared with other homes	12	11	13	3	13	11
Yes, community/local authority bus	32	11	14	10	10	13
No	38	58	60	61	61	57

Table 3.11: Activities arranged for residents by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
<i>Arrangement of activity programme (%)</i>						
No programme	1	5	5	3	5	4
Staff with responsibility to organise	17	15	31	32	29	22
General staff member	17	25	15	15	23	22
Number of staff share responsibility	40	40	30	28	22	33
Outside volunteer or professional	21	11	16	20	11	14
Someone else	4	3	3	3	9	5
Residents/resident committee	<1	0	2	0	<1	<1
Relatives/relatives association	0	0	0	1	0	<1
<i>Activities arranged at least once a month (%)</i>						
Bingo/games	97	89	83	89	89	89
Religious services	94	74	98	94	89	85
Exercise	69	74	74	86	89	79
Reality orientation or reminiscence	71	63	49	68	68	63
Films or videos	70	63	69	73	66	65
Outside entertainment	61	50	60	79	68	60
Discussion groups	66	51	62	62	63	55
Arts and crafts	66	45	57	59	65	55
Social hour	62	43	66	48	59	49
Clubs/social groups	58	39	45	57	46	43
Trips and outings	50	39	48	50	43	44
Parties	37	40	36	41	50	41
Self-help or mutual support group	33	23	30	33	30	28
Classes or lectures	10	6	17	15	11	10

Table 3.12: Services provided for non-residents by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
Services provided for non-residents (%)						
Day care	87	40	46	37	24	42
Meals on wheels	43	9	14	4	7	12
Laundry	39	5	16	7	6	10
Home care	21	5	12	12	9	9
Sheltered housing	5	1	14	8	3	4
Close care	3	1	7	7	2	3
Bathing services	47	15	23	20	10	19
Wheelchair loan	17	5	11	5	2	6
Meals at the home	6	1	5	1	3	3
Trips	1	0	0	0	1	<1
Out of hours care	6	0	1	0	1	<1
Alarm system	1	0	0	0	0	<1
Physiotherapy	0	0	0	1	1	<1
Occupational therapy	2	1	3	0	1	2
Provide a venue for groups	5	1	1	1	1	1
Drop in facility	3	0	2	0	0	<1
Provide information and advice	1	0	0	0	0	<1
Other services	21	4	7	3	5	6

Table 3.13: Involvement of proprietors by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76 ¹	159 ¹	672
<i>Number of proprietors (%)</i>						
None	-	13	-	31	43	-
1	-	28	-	33	23	-
2	-	54	-	33	25	-
3	-	3	-	2	7	-
4 or more	-	3	-	2	3	-
<i>Number of hours worked by proprietors</i>						
Mean	-	45.1	-	31.0	37.0	-
Median	-	44.0	-	30.7	37.0	-
Minimum	-	2	-	2	4	-
Maximum	-	98	-	65	90	-

Note: 1. There were 53 private dual registered homes and 140 private nursing homes.

Table 3.14: Staffing by home type

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
Mean number of staff						
Full time care staff	10.9	6.6	9.1	17.4	18.3	10.5
Part time care staff	15.0	8.0	11.3	15.7	16.0	11.2
Full time other staff	2.7	0.8	2.7	4.0	4.2	2.1
Part time other staff	7.0	2.4	5.9	6.1	6.3	4.2
Median number of staff						
Full time care staff	10.3	6.0	9.0	16.9	15.0	8.0
Part time care staff	14.0	7.0	10.2	15.0	14.8	10.0
Full time other staff	2.0	0.0	2.0	3.0	3.0	1.0
Part time other staff	7.0	2.0	5.0	5.0	5.0	3.0

Table 3.15: Mean estimated staffing ratios for care staff by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>		
<i>Number of homes</i>	167	148	122	76 ¹	159 ¹
Mean estimated staffing ratios (hours per week)					
All homes					
Employees:places	24	22	23	30	31
Employees:residents	27	26	26	38	36
Private homes ²					
Employees:places	-	22	-	32	32
Proprietors+employees:places	-	27	-	33	34
Employees:residents	-	26	-	35	37
Proprietors+employees:residents	-	34	-	37	40

Notes: 1. There were 53 private dual registered homes and 140 private nursing homes.

2. Homes with proprietors working in the home.

Table 3.16: Availability of care staff on date of interview by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
<i>Number of supervisory staff (%)</i>						
<i>Morning</i>						
None	2	11	19	3	7	9
1	74	54	50	70	63	59
2	22	29	26	20	22	26
3 or more	2	6	5	8	9	6
<i>Afternoon</i>						
None	0	6	4	4	6	5
1	52	58	57	75	67	60
2	38	32	34	17	19	29
3 or more	10	4	5	4	8	6
<i>Evening</i>						
None	7	37	29	54	42	36
1	90	43	63	37	49	50
2	3	19	7	8	8	13
3 or more	0	1	2	1	1	1
<i>Night</i>						
None	57	72	74	76	63	69
1	42	17	24	20	34	24
2	1	11	2	4	3	7
3 or more	1	1	1	0	1	<1

Table 3.16 (cont'd): Availability of care staff on date of interview by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
Other care and nursing staff						
Morning						
Mean	4.4	2.8	3.8	6.8	7.2	4.2
Minimum	1	0	0	2	2	0
Maximum	13	9	24	17	36	36
Afternoon						
Mean	4.2	2.3	3.3	5.7	6.0	3.6
Minimum	1	0	0	1	1	0
Maximum	14	9	18	15	34	34
Evening						
Mean	3.6	2.2	3.1	5.2	5.8	3.4
Minimum	1	0	0	1	1	0
Maximum	9	8	18	12	55	55
Night						
Mean	2.1	1.3	1.8	3.2	3.3	2.0
Minimum	0	0	0	1	1	0
Maximum	4	4	6	7	18	18
Number of other care and nursing staff (%)						
Night						
None	1	11	6	0	0	7
1	7	51	18	8	11	32
2	81	32	69	27	30	39
3 or more	12	5	7	65	59	22

Table 3.17: Methods employed when care staff are off sick by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
<i>Main method used (%)</i>						
Agency staff brought in	1	1	3	7	9	3
Other staff work more hours	61	83	56	61	59	72
Have relief staff on call	33	7	36	16	21	16
Have a few people can call on	3	5	3	13	10	6
Manage with staff on duty	2	3	1	1	1	2
Other method	1	1	2	1	0	<1
<i>All methods used (%)</i>						
Agency staff brought in	14	21	31	68	49	32
Other staff work more hours	92	97	91	89	93	95
Have relief staff on call	78	40	69	43	49	49
Have a few people can call on	18	46	22	42	38	38
Manage with staff on duty	22	30	24	18	29	27
Other method	1	1	2	1	0	1

Table 3.18: Proportion of homes with qualified staff by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
Proportion of homes with at least one member of staff (%)						
With nursing qualifications	44	48	56	100	100	62
Working towards nursing qualifications	2	7	3	23	19	10
With social work qualifications	55	17	23	17	9	19
Working towards social work qualifications	8	2	7	3	2	3
With other relevant qualifications	71	62	64	71	64	64
Working towards other relevant qualifications	75	61	65	84	76	67
Mean no. of staff with nursing qualifications as a percentage of home size	4.8	9.5	5.9	26.7	30.6	15.7

Table 3.19: Staff training and volunteer help by type of home

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	167	148	122	76	159	672
Proportion of homes undertaking staff training during six months before interview date (%)						
No training	0	5	3	0	0	3
In-house training	97	92	94	99	98	97
Outside expert conducted sessions	83	59	62	84	78	69
Staff attend outside courses	95	73	77	86	92	83
Staff following distance learning programme	20	11	15	32	36	20
Other training	9	7	6	5	6	7
Proportion of homes with trained workplace NVQ assessors on staff (%)	64	46	49	66	77	56
Proportion of homes with volunteer helpers (%)						
Yes, every day	10	2	12	3	4	4
Yes, every week	40	10	29	22	21	18
Yes, less than weekly	1	7	7	3	2	5
Yes, occasionally	12	15	14	26	17	16
No	38	67	39	46	57	58

Table 3.20: Sheltered Care Environment Scale subscale and dimension descriptions

Relationship Dimensions	
1. Cohesion	How helpful and supportive staff members are toward residents and how involved and supportive residents are with each other
2. Conflict	The extent to which residents express anger and are critical of each other and of the facility
Personal Growth Dimensions	
3. Independence	How self-sufficient residents are encouraged to be in their personal affairs and how much responsibility and self-direction they exercise
4. Self-disclosure	The extent to which residents express openly their feelings and personal concerns
System Maintenance and Change Dimensions	
5. Organization	How important order and organization are in the facility, the extent to which residents know what to expect in their daily routine, and the clarity of rules and procedures
6. Resident Influence	The extent to which residents can influence the rules and policies of the facility and are free from restrictive regulations
7. Physical Comfort	The extent to which comfort, privacy, pleasant decor, and sensory satisfaction are provided by the physical environment

Table 3.21: Average Sheltered Care Environment Scale scores by home type

	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>Total²</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>			
<i>Number of homes</i>	158	125	107	73	139	601
<i>Subscale</i>						
Cohesion	64	75	68	65	67	71
Conflict	75	61	66	66	63	64
Independence	40	47	44	41	39	44
Self-disclosure	66	67	63	65	62	66
Organization	61	81	70	67	68	74
Resident Influence	72	68	68	66	64	68
Physical Comfort	71	88	81	76	76	82

Notes: 1. Values shown indicate percentage of each subscale's maximum score.
 2. Reflects national average distribution of homes.

Chapter 4

Prices, Demand and Costs of Residential and Nursing Home Care

4.1 Introduction

Policy makers charged with the responsibility for developing and enabling the commissioning of care for frail elderly people and, at a more strategic level, determining ways of managing and regulating the care home market need information about the nature of providers in the market and about how these providers behave. In this chapter we report the results of analyses of prices and costs of independent sector providers and costs of local authority provision. The analysis of independent provision investigates why prices vary between providers and teases out indicators of the important determinants of pricing. In doing so we also analyse factors associated with demand for places from independent providers. The local authority analysis identifies the important factors that influence revenue expenditure of homes and investigates the degree to which changes in unit costs over time are associated with changes in the dependency of residents being cared for.

4.2 Analysis of Independent Residential Care and Nursing Home Prices

In broad terms prices can be thought of as determined by the interplay of demand and supply, or more precisely in an imperfectly competitive market, the interaction of each provider's demand and cost structure.

Residential and nursing home care organisations are constrained by the demand for their service in the prices they can charge. The extent and sensitivity of demand for a home's product will dictate what prices can be charged for the provider to expect to fill particular numbers of beds. The normal expectation is that the number of units sold will be inversely related to the price charged, having accounted for the characteristics of the product such as home location, types of clients served, quality, nature of the home's daily regime, and so on. A change in prices would therefore correspond to an opposite change in the numbers of people attracted to the home because potential residents would switch to or from substitute homes or different care alternatives, such as domiciliary care.

Furthermore, given the home's fixed costs (primarily costs of servicing capital) the home's cost structure will affect the level of variable costs (and, therefore, total costs) that correspond to particular numbers of filled beds. Taking demand and cost structure together, an organisation will choose which prices to set, according to its particular objectives (to make a profit, for example),

given that this choice will affect the number of people wishing to reside in the home and therefore the home's costs.

In framing a home's business decisions in this way, we can say that the difference between price and cost - the mark-up level - will depend on the provider's cost and demand functions. In that our purpose is to consider factors associated with the price decisions of the homes in our sample, we can express this in a slightly re-arranged form:

$$Price = cost + mark-up$$

whereby price is given by (constant) marginal cost plus mark-up. Furthermore, marginal cost (the cost of an additional filled bed) depends on factors in each home's cost function, whilst mark-up is affected by both the extent and elasticity¹ of the demand each home faces for its product and also its cost function.

Dual registered homes were excluded from the analyses as there were insufficient numbers to undertake separate analyses and they were not appropriately combined with either residential or nursing homes.

Prices

Information about prices was collected at the resident level. Table 4.1 reports gross weekly charges for permanent and short-stay residents averaged for each type of home.

Table 4.1: Weekly charges in independent homes by care type

	<i>Nursing</i>		<i>Residential</i>		<i>All</i>	
	<i>Mean</i>	<i>No.</i>	<i>Mean</i>	<i>No.</i>	<i>Mean</i>	<i>No.</i>
<i>Permanent residents</i>						
Private	334	146	238	111	294	282
Voluntary	328	5	235	111	249	128
All	334	152	237	222	280	410
<i>Short-stay residents</i>	323	38	251	44	284	88

¹ Elasticity of demand is the sensitivity of demand levels to variation in other factors.

The expected difference in average prices, moving from nursing to residential care, is in evidence. It is interesting to note that the average price paid by short-term residents was lower in nursing homes than that paid by permanent residents. In terms of crude mean prices for each sub-sample, permanent nursing care is approximately £100 per week more expensive than residential care. This difference easily exceeds two standard deviations from mean residential care prices and strongly suggests that residential and nursing homes are highly differentiated according to users in the market. Dual registered homes, which charged £318 per week on average, fill the middle ground in terms of pricing, but are currently a relatively small, although rapidly growing, sector of the market.

Table 4.2 shows average prices by care type and authority. Across all care types, homes in London are consistently more expensive. Standard explanations for this pattern include the high costs and so low supply of care in London, the types of clients that are located in London, different funding levels and patterns of demand by London authorities and so forth. A number of these explanations are explored below.

Table 4.2: Average gross weekly prices - independent sector by care type

<i>Authority type</i>	<i>Nursing</i>		<i>Residential</i>		<i>All</i>	
	<i>Mean</i>	<i>No.</i>	<i>Mean</i>	<i>No.</i>	<i>Mean</i>	<i>No.</i>
London	413	23	295	29	353	56
Met	312	40	223	56	263	106
Shire	324	89	230	137	270	248
All	334	152	237	222	280	410

Nursing care

One important issue whenever the prices of residential and nursing home care are compared is that like is not being compared with like. The cost of most nursing is included in the price of nursing homes but is borne by the NHS in the form community nursing services in residential homes. The analyses reported below do not at present include nursing care costs although future work will do so. To provide an indication of the costs excluded at present, table 4.3 shows the proportion of residents requiring nursing care and the estimated cost of the care received. The cost is based on frequency of receipt and using a unit cost of £12 per visit assuming a 20 minute visit by a district nurse (Netten and Dennett, 1997). Although the proportion of people needing nursing care is very similar in each type of care home the level of service receipt is higher in local authority and voluntary homes. There is no clear reason for this in terms of the types of care identified (see table 2.11 in Chapter 2).





Table 4.3: Nursing costs by home type

	<i>Residential homes</i>			<i>Nursing homes</i>	<i>All homes</i>
	<i>Local authority</i>	<i>Private</i>	<i>Voluntary</i>		
Total number of homes	157	123	110	137	596
Average % needing nursing care	24	26	24	87	45
Average weekly cost per resident of community nursing (£)	5.78	3.85	5.13	0.45	3.45
Maximum average weekly cost per resident of community nursing (£)	68.57	44.00	65.00	12.89	68.57

4.2.1 Factors associated with prices

As indicated above, price is associated with mark-up and cost. In turn, mark-up and cost are theoretically determined by a number of factors, which can be grouped into four categories as described in table 4.4 (see Forder and Netten, 1997, for details). Empirical ‘proxies’ or measures of these factors are also listed.

Table 4.4: Factors affecting demand for and costs of homes

	<i>Demand and cost factors</i>	<i>Empirical proxy</i>
 <i>Cost</i> 	<i>Client characteristics:</i> Physical dependency/need Mental dependency/need	Barthel scores MDS/CPS Confusion scores
	<i>Product characteristics:</i> Places sold Physical fabric of home Organisational arrangements Types of care/clients Home environment Ownership Home size	Number of residents Single room proportions Purpose built Single home organisation Started from scratch On local authority preferred list Terminal care provided Mental health care provided Primarily privately-funded residents Primarily LA funded residents Provision of entertainment Private or voluntary Number of beds
	<i>Local authority characteristics:</i> Local area labour costs Competition/market structure Market size/type	LA wage rate (female manual) Nursing places per LA per LA pop Local GDP LA population
<i>Demand</i> 	<i>Commissioning/purchasing characteristics:</i> Pricing arrangements/ reimbursement structure Purchaser type	LA has fixed/non-contingent pricing Variable per client (price) contract Home level, independent of client (price) contract % of people privately funded % of people LA funded

The arrows in the first column indicate which of the factors are associated with cost and which with demand.

A number of key factors in each category (marked in italic in the table) warrant further description. Data are shown here for those homes where information about weekly charges was available so exclude 44 nursing homes and 81 residential homes included in earlier chapters.

Physical dependency

Client physical dependency as measured here by the Barthel Index of Activities of Daily Living is described in some detail in the section on individual residents. In the analysis of price and cost we required a measure of dependency at the home level and therefore used the average score across each home's sample of residents. The range of mean scores is described in table 4.5.

Table 4.5: Average Barthel scores

<i>Home type</i>	<i>Mean</i>	<i>Std dev.</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Cases</i>
Residential	13.49	2.40	4.53	19.55	191
Nursing	7.29	2.48	1.80	18.35	147

Places sold

Table 4.6 shows the number of total residents - both permanent and short-stay - by home type. Also in the table is the number of homes and total capacity (number of beds).

Table 4.6: Output and composition - by home type

	<i>Nursing¹</i>	<i>Private residential</i>	<i>Voluntary residential</i>	<i>Local authority</i>	<i>All</i>
<i>Places sold</i>					
Number of permanent residents	7303	2711	4337	5108	19459
Number of short-stay residents	121	33	77	612	843
Number of homes	191	136	136	167	630
Number of beds	8597	3156	4652	6067	22472

Note: 1. Nine of these are voluntary.

Table 4.7 shows the mean number of places sold per home. This number includes places paid for but not yet filled in addition to resident numbers.

Table 4.7: Average places sold (residents) per home

	<i>Mean</i>	<i>Std dev.</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Cases</i>
Residential	26	13.67	3	95	191
Nursing	39	27.80	8	196	147

Local market labour input costs

The labour intensive nature of residential and nursing care means that labour input prices are an important component of home level cost. Care homes have a sizeable proportion of part-time staff and also a wide range of skill and training mixes. The number, intensity and skill mix of staff are assumed to be directly associated with the extent of production of the ‘care service’. Indeed, homes are required by law to maintain minimum ratios of staff to residents and in nursing homes to staff on duty with nursing qualifications. Furthermore, there is very little opportunity for substitution of labour with capital. We suppose, therefore, that total costs are directly proportional to the output of the home. This supposition means that average and marginal labour costs are constant, being simply the unit cost or price (wage) of labour inputs determined by the local labour market (but adjusted by considerations such as employment conditions of local authority employees). According to our theoretical model, price will change with marginal costs on a pound-for-pound basis.

Survey homes were requested to provide information on their basic pay levels for their least qualified staff. These wage rates are, however, specific to the home and whilst it is likely that they reflect local labour market prices, they constitute ‘realised’ labour prices and will be interrelated with a provider’s demand for labour (which is linked to its output). These prices are the outcome of labour decisions, not the basis on which these decisions were made. There is always a problem in selecting an appropriate indicator as the closer it is to the appropriate wage rate the more likely it is to be affected by decisions made by the purchasers of labour under consideration. General service sector wages would be one indicator but information was not available at the local authority level. In practice the labour costs in care homes are dominated by manual wages. On this basis we use labour input prices from the New Earnings Survey 1996 (DoE) that are exogenous to individual homes. Table 4.8 shows the mean wage per week in the female, manual category as it pertains to the nursing home and residential care home sub-samples.

Table 4.8: Mean wage per week (female, manual)

<i>Authority type</i>	<i>Nursing</i>	<i>Residential</i>
London	365	365
Met	265	267
Shire	255	258
All	275	275

We can nonetheless compare these data with homes' basic pay rates. Table 4.9 shows basic *hourly* wage rates by authority type and table 4.10 shows this information by home type.

Table 4.9: Basic hourly wage rates - by authority type

<i>Authority type</i>	<i>Care type</i>				
	<i>Nursing</i>	<i>Dual registered</i>	<i>Residential</i>	<i>Local authority</i>	<i>All</i>
London					
Mean	3.84	4.53	4.14	5.41	4.35
Max	5.50	5.40	5.50	7.60	7.60
Min	3.00	3.50	3.00	4.90	3.00
n	30	4	34	20	88
Met					
Mean	3.23	3.46	3.58	4.32	3.66
Max	4.11	4.20	4.42	4.80	4.80
Min	2.40	3.00	2.50	4.00	2.40
n	50	11	64	42	167
Shire					
Mean	3.31	3.40	3.46	4.32	3.63
Max	7.55	4.17	5.27	4.96	7.55
Min	2.60	2.50	2.40	3.82	2.40
n	106	27	162	97	392
All					
Mean	3.38	3.52	3.58	4.46	3.73
Max	7.55	5.40	5.50	7.60	7.60
Min	2.40	2.50	2.40	3.82	2.40
n	186	42	260	159	647

Table 4.10 provides wage information as it relates to six hourly wage rate bands. A majority of nursing homes and private residential homes have basic wage rates below £4 per hour. By contrast, a very high proportion of local authority homes have wage rates in the £4 to £5 per hour band. This basic wage rate is a fairly reliable indicator that local authority homes have higher input costs and we would expect a strong positive correlation with total production costs. Wage rates also vary by authority type with London most expensive and metropolitan authorities least expensive (see tables 4.8 and 4.9). Residential care rates (excluding local authority homes) actually appear to be slightly higher than nursing home rates. This pattern is consistent across each authority type.

Table 4.10: Basic hourly wage rates - by home type

	<i>Nursing</i>	<i>Private residential</i>	<i>Voluntary residential</i>	<i>Dual registered</i>	<i>Local authority</i>	<i>All</i>
£2 to <£3	23	27	2	4	0	56
£3 to <£4	141	96	68	30	5	340
£4 to <£5	20	9	49	6	140	224
£5 to <£6	1	1	8	2	11	23
£6 to <£7	0	0	0	0	2	2
£7 to <£8	0	1	0	0	1	2

Pricing structures

Table 4.11 shows the percentage of independent homes operating with the listed contract/reimbursement types. Homes with multiple sponsors were able to operate with more than one type.

Table 4.11: Contract type - percentage of homes

	<i>Nursing</i>	<i>Residential</i>
Price set on a per-client basis	21	18
Price tariff set at home level with dependency premia	33	42
Price set at home level without dependency premia	52	43
Number of homes	136	191

4.2.2 Types of analysis

In the short term the price charged is the cost to the local authority. Factors that affect this price are clearly of interest and the analyses below describe these. But in the long term it will be the relationship with cost factors, such as increasing dependency among residents, that will influence these prices. Clearly, therefore, it is important to distinguish as far as possible the underlying, unobserved relationship with costs. This requires a number of analyses which are briefly described below and examined in more detail in the annex to this chapter.

In table 4.4 we identified factors which are assumed to be determinants of mark-up/demand and cost and so ultimately, determinants of price. The impact of this set of factors on price is likely to be misleading if each factor is considered in isolation. We therefore employ multi-variate analysis techniques to look at the differences in each factor as they relate to particular homes and the prices charged and costs generated by each home. By identifying patterns of association between prices and these factors we can begin to infer the importance of each factor for homes in setting their prices. Similarly, we can tease out patterns between costs and relevant sets of factors.

Three types of analysis are undertaken with the distinction between each being best explained with reference to the underlying relationship: $price = marginal\ cost + mark-up$. Potential levels of mark-up are theoretically determined by the nature of demand an organisation faces for its 'product' (Forder, 1998a) and so factors which have a bearing on demand will also affect mark-up. In particular, we can use information about the shape of the demand curve to determine mark-up levels. Therefore, the first element of the analysis is an estimation of a *demand-* (and so *mark-up-*) *function*. The demand function for each home's product takes the following form:

Demand (places sold) = D[Price, market characteristics, commissioning characteristics, product characteristics] \Rightarrow *mark-up*.

Demand might vary with: the price of the product; the type of product being sold according to the physical fabric of the home; the types of clients it caters for; and, local levels of competition. For our purposes, the most convenient form in which to estimate this demand function is to re-arrange it with price as the dependent variable and places sold as one of the independent variables.

The second element of the analysis is to estimate a *cost* function, that is to calculate associations between cost and cost-raising factors. With reference to table 4.4, the relevant categories are:

$Cost = C[\text{output (places sold), client characteristics, market characteristics (local input prices), product characteristics}]$.

Examples of factors in the cost function are: physical dependence of residents, the proportion of single rooms, home size, and local market labour costs. Marginal costs cannot be observed at the home level, but prices are available and mark-up is estimated using information in the demand function. Therefore, costs can be determined by simple subtraction: $marginal\ cost = Price - mark-up$. This calculated value is the dependent variable in the cost function estimation.

In addition to estimating mark-up and cost separately, the third element of the analysis is an estimation of the whole relationship: $price = cost + mark-up$. Price is the dependent variable, and the factors which go into the cost and mark-up (demand) functions are used directly to replace cost and mark-up. This 'reduced-form' estimation is therefore:

$Price = P[\text{client characteristics, market characteristics, commissioning characteristics, product characteristics (excluding output)}]$.

The reduced-form estimation has the advantage of incorporating both (exogenous) demand and cost factors. In particular, it can provide us with estimates of the association between client dependency and prices.

4.2.3 Data

In view of the above evidence, two sub-samples of the data distinguishing nursing care homes and residential care homes were employed.^{2,3} Data were available for 147 nursing homes and 199 residential care homes.

The unit of the transaction between purchaser and provider is the care home 'place' and prices are expressed and charged on this per-case basis. However, from the perspective of the provider, the home is the basis of production of care services. Prices per individual resident are clearly not made in complete isolation of the prices charged to other clients. Therefore, in looking to understand differences in prices, we need to conduct our analysis at the lowest common denominator which is

² At this stage a separation of voluntary sector and private sector residential care homes into distinct sub-samples was not undertaken for three reasons. First, the theoretical and empirical literature, whilst identifying some differences between private and voluntary sector homes, also indicates that the sectors have important and sizeable overlaps (a so-called 'blurring' of the boundaries). Separation of the sectors may then artificially preclude the impact of inter-sectoral spillovers in the analysis. Second, and following closely with the first point, initial statistical analysis on separate sub-samples produced diagnostic statistics that point to mis-specification bias. This renders the estimates of the relationships between the variables highly unsafe. Finally, the sub-sample size falls below 100 cases and begins to raise problems of small sample estimation.

³ Dual registered homes were excluded for the most part. However, a small number of homes included in the analysis (one residential and 26 nursing) were later reclassified as dual registered homes. Excluding these homes does not affect the conclusions presented here.

the home level. However, not all homes set the same price per resident and so an average of the prices charged to residents in the home was used to reflect *the* home price. In fact the ‘price’ in this context is the average for the home of the gross weekly charge made for the resident’s service. Client characteristics data also required averaging across the residents in the home. All other variables have a single value for the individual home in the sample.

4.3 Results

In this section we discuss the results of the three types of analysis around six sets of relationships that are listed in box 4.1.

The first set of relationships is from the estimation of the demand function. The second set results from the estimation of the cost function, and the last four are all produced by the reduced-form price estimation. The actual empirical variables included in each analysis type are summarised by tables A4.1 and A4.2 in the chapter annex. Descriptive statistics of the raw data used in the analysis are given in tables A4.3 and A4.4 in the chapter annex.

Box 4.1: Key relationships

1. Price and output (places sold), which provides information to calculate mark-up and marginal cost.
- 2(a). Marginal cost and dependency.
- 2(b). Price and client characteristics; in particular, associations between price and dependency (ADLs).
3. Price and product characteristics.
4. Price and local authority characteristics, particularly associations between price and local area labour costs and also between price and competition indicators.
5. Price and commissioning arrangements.

Tables 4.12 and 4.13 summarise the results of the reduced-form price estimation for the nursing and residential care sub-samples of the data respectively. (The estimated demand function results and diagnostic statistics are in tables A4.5, A4.6, A4.11 and A4.12 in the chapter annex.) The figures in each table represent the percentage change in price as associated with a one per cent change in the listed factor from its mean value. They are calculated on the assumption that other factors remain constant; the figures are known as *partial effects*.

Thus, for example, a one per cent increase in the LA wage level is associated with a +0.81 per cent change in the mean residential care home price (table 4.13). An identical change is associated with +0.45 per cent change in mean nursing home price (table 4.12). Also, a one per cent increase in the proportion of homes that are purpose built compared rather than converted, is associated with a 0.016 per cent increase in the mean nursing home price. In the models shown the relationship

between a given variable and price represents its combined demand, cost and mark-up effect. Thus we cannot say, continuing our example, that homes which are purpose built are more costly because they are in greater demand or that they cost more.

Marginal cost was calculated using information from the demand function (see tables A4.7 and A4.8 in the chapter annex). In the calculations a number of assumptions were required and these make the estimates somewhat tentative. Nonetheless, the advantages of a marginal cost estimate is that any relationships estimated with explanatory factors should be free of demand-side effects. For example, a private sector home may have different cost structures to a voluntary sector home, but ownership is also likely to affect the demand for a home. The reduced form estimate of the relationship of price to ownership will encompass both demand and cost effect. Estimating a marginal cost function enables us to distinguish between these effects. Another relevant example is that a marginal cost function is not affected by local authority price regulation. Many authorities do not distinguish between different levels of client dependency within both the residential and nursing home sectors, and impose a fixed price. As a result we would expect to see relatively small fluctuations in price as associated with different dependency levels. However, we might hypothesise that different levels of dependency do have a much stronger effect on cost which is not constrained in the same (direct) way. A cost function estimate allows us to address this hypothesis. Full results of the analyses are not reported here, although the relationship between estimated marginal cost and dependency is reported and discussed below.

Table 4.12: Price analysis - nursing homes

<i>Variable</i>	<i>Per cent change in price</i>
<i>Dependency characteristics</i>	
+1% Barthel score	-0.007
+1% Barthel - high LA funded (+1 SE)	-0.001
+1% Barthel - low LA funded (-1 SE)	-0.014
<i>Product characteristics</i>	
Purpose built	0.016
Started from scratch	-0.015
Mental health (committed beds)	-0.005
Single rooms (per bed)	0.040
Not on LA list	-0.011
Single home organisation	0.009
<i>LA characteristics</i>	
Female wage (LA)	0.449
Nursing places per LA per head	-0.055
<i>Commissioning/purchasing</i>	
Fixed price LA	0.007
Fixed price LA - non-London	0.001
Fixed price LA - London	0.040
+1% LA funded	-0.042

Table 4.13: Price analysis - residential care homes

<i>Variable</i>	<i>Per cent change in price</i>
<i>Dependency characteristics</i>	
+1% Barthel score	-0.125
+1% Barthel - private home	-0.025
+1% Barthel - vol home	-0.235
<i>Product characteristics</i>	
Private home	0.022
Purpose built	0.008
Home started from scratch	0.019
Single room (per bed)	0.026
Small home (<10 places)	-0.003
<i>LA characteristics</i>	
Female wage (LA)	0.812
Total places (nurs and resid) per head in LA	-0.019
Total places (nurs and resid) per head in London LA	-0.052
LA population	-0.006
<i>Commissioning/purchasing</i>	
Price set independently of dependency	-0.011
+1% Privately funded	0.022

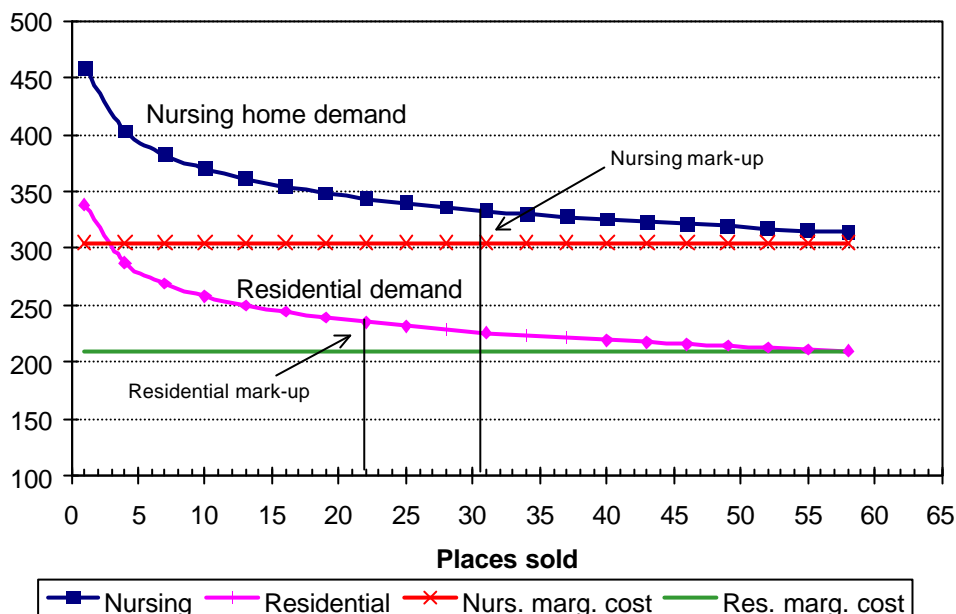
4.3.1 Key relationships

The information provided by the demand, cost and reduced-form analysis reported in the above tables illuminates the six key relationships described in box 4.1.

Price and output

The relationship between price and the number of places sold defines the demand function (see chapter annex tables 4.5 and 4.6). The demand function estimates can be plotted over a range of values of output to generate a ‘demand curve’ for both residential and nursing homes (see figure 4.1). The demand curves are downward sloping implying that an increase in price will attract lower demand, other factors being held constant.

Fig 4.1. Demand for residential and nursing home places



Cost, price and client dependency

In preliminary stages of the statistical investigation a wide range of proxy variables or measures of client dependency were used in the statistical model, including: client mental health, cognitive impairment, challenging behaviour and physical health. However, only Barthel scores of client ADLs produced a reliable statistical relationship in the reduced-form model.⁴ Cognitive impairment was also significant in the cost function estimates.

As reported in tables 4.12 and 4.13 the relationship between *price* and Barthel score for very small variations in Barthel (one per cent changes in the tables) around its mean value is negative for both nursing and residential samples. In other words, slightly higher dependency is associated with slightly higher prices, controlling for other contributory factors at their mean values (high Barthel scores mean low dependency).

In both care settings, but particularly in nursing care, the size of the relationship at the mean is very small (although highly significant). As shown in the tables, for nursing homes a one per cent rise in Barthel corresponds to less than one hundredth of one per cent fall in price. The size of this relationship is larger, however, for homes with low levels of local authority purchasing. The size of the price-dependency relationship at the mean for residential care homes is -12.5 hundredths of one per cent associated with a one per cent increase in Barthel score. At the mean, we also found that

⁴ Such a result is not surprising given that these variables are highly correlated and, in a sense, crowd each other out in the estimation.

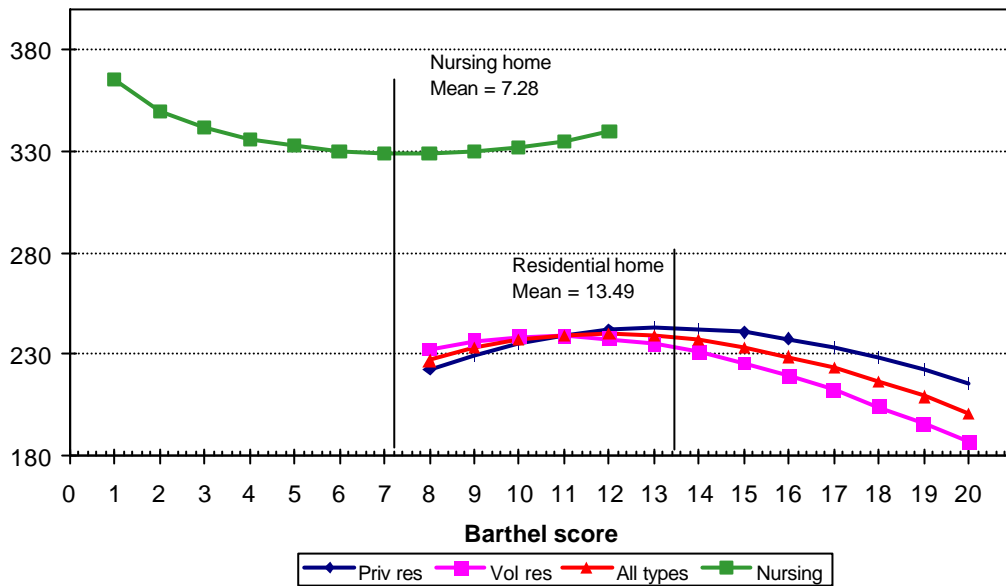
the price-dependency relationship is much bigger for voluntary sector homes (-23.5 hundredths of one per cent).

In the cost function estimation, the relationship between cost and Barthel Index was stronger than in the price function. For nursing, the size of the relationship at the mean is a 2 hundredths of one per cent fall in price associated with a one per cent increase in Barthel score. The corresponding figure for residential care is 17 hundredths of one per cent. This finding - that the size of the relationship is larger at the mean value than for the price function - is consistent with the expected effects of local authority pricing regulation which limits the extent to which prices can be made contingent on client dependency (see above). This hypothesis is also supported by the finding that homes with higher proportions of private payers - and therefore less affected by local authority pricing - exhibit more sizeable changes in price as associated with different Barthel scores.

We found that non-linear relationships offered much the better fit (i.e. better 'explanation' of the data) for both the nursing and residential care samples. These relationships are summarised in figure 4.2. The price functions for private and voluntary residential care are also illustrated separately in the figure.

The relationship between *marginal cost* and Barthel as estimated in the cost function analysis and summarised in figure 4.3 also produces similar results to the price function over a range of Barthel values. The heavy lines show the respective cost functions. The thin lines in figure 4.3 are the tangents on the cost functions for residential and nursing home sub-samples. They show the projection of the cost to dependency relationship that is estimated around the mean values of the Barthel score for the respective sub-samples. The dashed line is an approximate combined effect which is discussed below.

Fig 4.2. How price varies with dependency

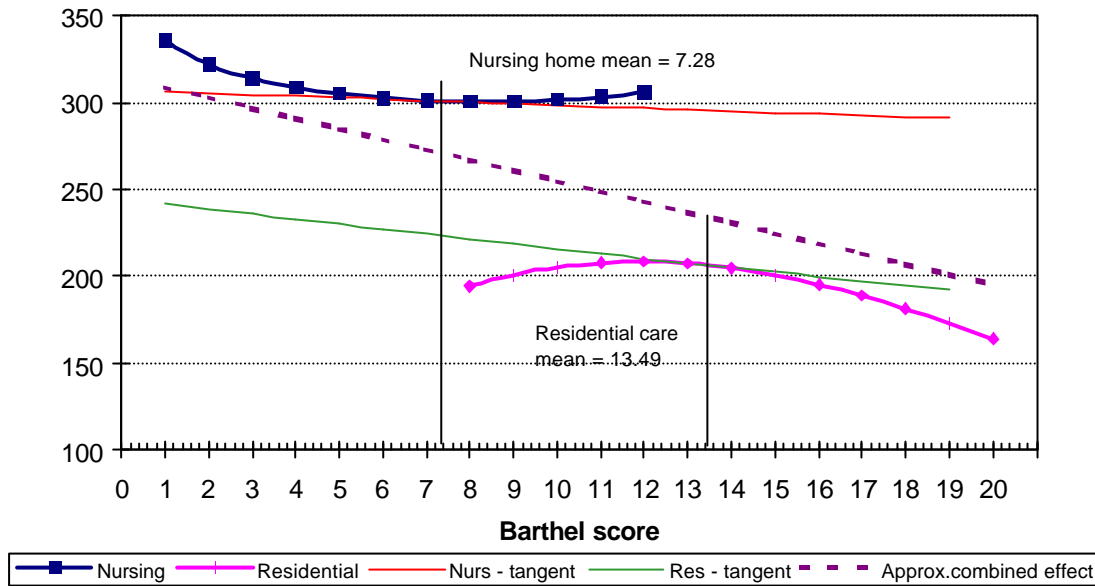


Two implications are readily apparent from the figures. First, because the relationships are non-linear, the size of the association between price/cost and Barthel score of the same one per cent change varies according to the value of Barthel from which the change is made. Second, the non-linear relationships are different in residential and nursing homes; the price and cost functions are u-shaped for nursing homes and n-shaped for residential care homes.

Where levels of dependency are high (around relatively low values of Barthel compared to the mean of 7.28) the nursing home price-dependency relationship is much steeper than at the mean. Moreover, where there is low dependency (relatively high values of Barthel) the relationship is very close to zero and in the extreme even becomes positive (meaning that a small increase in dependency actually associates with lower prices).

The opposite pattern holds for residential care. At relatively low values of the Barthel Index for residential care homes (around a score of 10) we also find a positive relationship between price and dependency. That is, as dependency levels fall, prices rise. However, at very high scores (very low dependency) the relationship is as expected, with lower dependency associated with lower prices. Moreover, at this level the relationship is far bigger in magnitude than at the mean Barthel value as given in table 4.12.

Fig 4.3. How cost varies with dependency



In order to gauge the relationship between dependency and price across the *whole* range of dependency (0 to 20) we can consider the nursing and residential care home price functions and also the two cost functions together. Again we have estimates of the associated changes in price/cost for small changes around particular values of Barthel scores. At very low values of dependency (high Barthel values, such as 18-19) a small decrease in the Barthel score has a strong effect with price and with cost. At this level the residential care portion of the function is relevant and has a steep, negative slope. Similarly, at very high levels of dependency (low Barthel scores) both cost and price functions are also steeply sloped (in this case the nursing home price and cost functions). The most interesting case is the middle Barthel values (between the nursing and residential care means). Here the price and cost functions appear almost flat for people in both nursing and residential care. This finding suggests that small changes in dependency for people at mid dependency values have very small effects on the costs of care, requiring almost no additional resource (staff) input and therefore hardly affect prices.

However, we might also attribute the relatively flat middle range to the dislocation or non-continuity between the prices in residential care and the prices in nursing care for people with very similar dependency. Consider a person at middle range dependency who is borderline between residential care and nursing care on the basis of observed levels of dependency in this survey. If they are in residential care, a slight increase in dependency either results in that person staying in residential care, but at basically the maximum care intensity, or moving into a nursing home. In the first case, the change in costs is minimal and so the top of the residential care function will be flat. But in the

second case, the small change in dependency results in a move to a nursing home and a £90 jump in cost and price.

Preliminary analyses reported in Forder (1998b) address this switching between residential and nursing care and combine the results with the individual residential and nursing home cost functions. The dashed line in figure 4.3 is a linear approximation of the net relationship between cost and dependency.

In all cases we need to be clear that the estimated functions are strictly valid only for very *small* changes around the *mean* value of (in this case) the Barthel score for the relevant sub-sample. The relationship between price/cost and Barthel becomes more approximate for scores increasingly removed from the mean value.

Price and product characteristics

Some statistically significant associations were found between price and those product characteristics described in table 4.4. With regard to *physical fabric of the home*, in both nursing and residential care home sectors higher prices were associated with homes that were purpose built. In table 4.12 the analysis suggested that a one per cent increase in the *proportion* of nursing homes that were purpose built (that is, from the mean of 38.1 per cent to 38.5 per cent) is associated with a 0.016 per cent rise in average price. At the individual home level this finding corresponds to a purpose-built home having approximately 4.1 per cent higher prices. Purpose-built residential care homes have 2.3 per cent higher prices than adapted premises all other factors held constant.

In the homes in the analysis the proportion of single rooms in nursing homes and residential homes was 63 per cent and 77 per cent respectively. The percentage change in price associated with a one per cent increase from these means was higher for nursing homes (0.040) than for residential homes (0.026).

The results are consistent with both purpose-built homes and homes with high proportions of single rooms facing relatively higher demand and/or having higher costs. In fact the demand function estimation suggests that it is the effects of these factors on demand which are dominant. The cost function estimates also support this supposition: purpose built cost elasticity is 0.00008 (much less than the 0.016 in the price function model).

A number of proxy factors for *organisational arrangements* were used in the price model. In the nursing home estimation single home organisations were associated with 2.21 per cent higher prices than organisations with more than one home. This finding suggests multiple-home organisations have better economies of scope and scale, particularly regarding access to capital. Moreover, this factor

was not found to be significantly different from zero in the demand function estimation suggesting that the dominant effect is on the costs side.

Organisations which were started from scratch rather than being inherited or being bought as ongoing concerns were found to have relatively lower prices (-2.86 per cent) in the nursing sample but slightly higher prices, relatively, in the residential care sample (+4.19 per cent). Also, nursing homes which were not on local authority preferred lists were associated with lower prices (-3.19 per cent), possibly reflecting lower demand and also lower costs.

The statistical analysis also uncovered associations between nursing home prices and whether the nursing home had any particular specialisms or *catered for particular client types*. In particular, homes that had committed beds for people with mental health problems were associated with lower prices than general nursing homes, although the effect was very small (-2.73 per cent). The preliminary cost function estimations suggest that nursing homes with either a large proportion of severely confused people or not confused people have lower prices than those with a lot of moderately confused people.

Home ownership demonstrated a significant association with price. Private residential care homes were found to be associated with 4.1 per cent higher prices than voluntary sector homes. This figure, as with all the others, is calculated on the basis that all other factors are held constant. Therefore, we are implicitly assuming that private and voluntary sectors homes are the same with respect to all other factors in the estimation.

This finding is consistent with a number of explanations. Private sector providers might place more weight on profit making compared to voluntary sector organisations and therefore increase prices. Likewise voluntary sector homes are often thought to lower prices in order to increase access by clients and to use reserves or other donated income. In practice, private and voluntary homes are different in a number of dimensions; although on average private and voluntary homes have almost identical prices (£238 compared with £235). As also shown in figure 4.2, ownership has an impact on *relationship* between price and dependency.

The size of the home is also expected to have a bearing on price; potential residents may have preferences for particular homes according to their size and therefore express demand in this fashion. Size also has implications for economies of scale and scope in affecting costs. Analysis of the nursing care sample failed to uncover any such relationships (either linear or quadratic in form). However, a weak relationship was uncovered for residential care homes. Specifically, small homes (those with less than 15 places) were associated with slightly lower prices than homes of all other

sizes. The demand estimation also uncovered a similar price elasticity suggesting that the lower price is due mainly to lower demand for smaller homes.

Price and local authority characteristics

The costs a provider faces will be affected by the price of the inputs into the production process. As discussed above, local labour market (female) wage rates were used to proxy labour input prices. In both residential and nursing samples this variable was found to have a very significant relationship with prices. The relationship between wages and prices was particularly sensitive in residential care at 0.81 per cent, that is, a one per cent rise in wages is associated with an eight-tenths of a one per cent rise in prices. In the nursing home sample the corresponding relationship was 0.45. Differences in input costs account for much of the difference between types of local authority, especially London and non-London authorities.⁵ No separate indicator of capital costs was included so it may well be that the wage rate is acting as a proxy for capital costs as well as labour costs.

Competition effects are modelled by the inclusion of market supply variables. In the nursing home model, the relationship between the supply variable (nursing places per head in the local authority) and price is negative: an increase in nursing places per head of one per cent corresponds to a 0.055 per cent fall in price. In residential care the total of nursing plus residential places (per head), with a control term for population density, was found to fit the data the best. This data generated a negative association between total places per head in the local authority (-0.019 at the mean). For a London sub-sample, price was more sensitive to differences in supply (-0.052 at the mean).

In all cases the negative relationship is consistent with the hypothesis that greater competition corresponds to lower prices. However, the effect is modest in size suggesting that the market is already rather competitive, a hypothesis supported by our estimations of mark-up rates at around 10 per cent (see addendum tables 4.7 and 4.8). Finding a larger association for London authorities is consistent with (at least) two explanations. First, that the market is currently less competitive in London and so small changes in supply have greater price effects. Second, that the local authority area in London is only a sub-section of the actual London market and therefore, underestimates supply and so overestimates the price coefficient on supply. As to the first hypothesis, the mark-up estimates from the demand analysis seem to be contradictory. Indeed, expressed as a percentage of mean price, mark-up rates were smaller in London at 8.80 per cent for nursing homes and 10.49 per cent for residential care (compared with respective non-London rates of 9.52 and 12.06 per

⁵ In preliminary estimations, the Area Cost Adjustment (see Chapter 6) was used to allow for regional variation as an influence on costs. However, whilst this variable was significant and in line with the above findings, it was superseded by the local authority characteristics variables in terms of statistical performance.

cent). Moreover, Forder and Netten (1997) find some support for the second hypothesis when looking at home admissions.

The model predicts a price of £425 for London based nursing homes and £321 for non-London homes. Actual averages for these two sub-samples are £427 and £323 which are very little different from the predicted values. This result implies that the model explains almost all of the average 32 per cent higher prices in London compared to non-London authorities.

In addition, the model predicts a price of £294 for London based residential care homes and £229 for non-London homes. Actual averages for these two sub-samples are £304 and £229. Although, this suggests some other London-specific factors are acting to increase actual London prices, the discrepancy is only 3.4 per cent of the actual price. Consequently, the model explains almost all of the average 33 per cent higher prices in London compared to non-London authorities.

Indeed, the local authority level factors generate no discrepancy between London and non-London residential care homes. Holding dependency, product and commissioning characteristics constant, the predicted prices for London homes, based on local authority characteristics, is £235. Repeating the process for the non-London homes the predicted price is £234 which is practically identical to the London sub-sample value.

Price and commissioning/purchasing characteristics

The estimated models indicate that privately-financed clients tend to have higher charges than clients with other sorts of funding for both nursing and residential care. This association, as with all others, is made whilst holding all other effects constant. In particular the association is calculated in isolation from differences in prices that are associated with clients having different dependency levels. This finding may be explained by local authorities having a substantial degree of buyer power in local markets enabling maintenance of low prices. As a demand variable this factor was not included in the cost function estimations.

Local authority commissioning arrangements are also expected to have an effect on prices and demand (Wistow et al., 1996). In a particular care setting, expectations about the impact of prices which are set independently of client dependency at the home level (so called *non-contingent* prices), compared with those set on a per-client basis (*contingent* prices), are uncertain because a number of effects may be at work which are potentially offsetting. First, there is some evidence that contingent prices lead to clients to being (re-)classified as more dependent than they really are, so as to attract higher (net) payments (i.e. raise prices relative to client's actual dependency). Second, in transactions with flexible contingent pricing, prices are less constrained or regulated and may move easily to a 'market clearing' level that resolves differences between demand and costs. If, by

contrast, the prevailing non-contingent fixed price used for other homes in the local market is high, then a flexible pricing system per client will lead to a market price below the fixed price and vice-versa. In other words, homes which are not constrained by an excessive fixed price, may lower prices to attract potential new residents. If, on the other hand, the fixed price is set too low, homes not so constrained might be able to raise prices and still maintain high occupancy. The upshot is that we cannot easily tell what the effect of price setting will be for a given market. Third, contingent pricing tends to reduce the risk placed on the provider (regarding payment to cover cost variations associated with dependency) and might be expected to offer lower prices in return (an insurance effect).

The residential care sample generated a positive relationship between contingent pricing and price. The result is derived while controlling for dependency differences suggesting that fixed prices are too low. The same result also occurs in the residential care demand function.

In the nursing home sample the reverse is true. Prices which are variable at the client level are associated with lower mean charges. Given dependency levels, the non-contingent fixed price may then be too high compared to the market price obtainable in this very competitive market, and where it is allowed to become less constrained, we see lower prices. This pattern fits the data nicely in regard to the very large dislocation between nursing and residential care prices, i.e. nursing prices may be too high and residential care prices may be too low (see figures 4.2 and 4.3). The hypothesis here is that this possible imperfection in pricing may be due to historical factors such as DSS limits for each type of care and, more recently, local authorities' (inappropriate) price setting/price regulatory behaviour.

In addition to purchasing independent residential and nursing home care, authorities have a third option when considering placement: their own provision. We turn now to factors affecting costs in the local authority managed sector.

4.4 Costs of Local Authority Managed Residential Care

Unit costs of local authority residential care have always been higher than the price of independently provided residential care (Netten, 1994b). This, together with financial incentives in funding, has led many authorities to reduce or even eliminate local provision. In the current survey, two of the authorities had no homes at all and one authority had just one local authority managed facility. This reduction in provision has been associated with dramatically rising revenue unit costs over recent years (Netten and Dennett, 1996). A number of arguments have been put forward for this: increased specialist roles of homes such as provision of care for people with dementia or short-term

care; the more inefficient homes being those that have remained in the public sector; and inaccurate measurement of costs with increasing use of homes to provide services for non-residents resulting in inappropriate costs being included. The survey provides an opportunity to investigate these issues, and to consider how the unit costs of homes in 1981, which were analysed by Darton and Knapp (1986), compare with unit costs in 1996.

4.4.1 Data

Local authorities were asked to provide information about expenditure on each of the local authority homes included in the survey for the financial year 1996/97. The data collected were based on expenditure returns to the Department of the Environment, Transport and the Regions, excluding recharges to other departments. No information was collected about capital value and so the results and analyses that follow reflect revenue costs of homes only. All the authorities except for one London borough were able to provide this information.

Annual cost was based on total expenditure less sales (which reflect charges for services for non-residents such as meals for visitors). Unit cost was estimated on the basis of dividing this annual cost by the number of residents present in the home at the time of the survey (conducted mid-way during the financial year) and number of weeks in the year (52.14). On this basis two homes were identified as outliers: one had a unit cost of less than £100 per week and the other a unit cost of over £775 per week. After initial analysis one further home was identified as an outlier, located in a metropolitan district and costing £639 per week. These three homes are excluded from the results reported below.

Authorities were asked whether the expenditure information included expenditure on any services provided to non-residents. The only such service for which expenditure was included was day care. This was included in expenditure for five of the 17 authorities.

4.5 Local Authority Homes Results

Cost information was available for 161 homes. Table 4.14 shows the average and range of unit costs of these homes by type of authority. Excluding the outliers (as described above) the average unit cost was close to £300 per week, 18 per cent less than the national average of £366 per week.⁶ London homes were 46 per cent more costly than homes in the rest of the country and 39 per cent more costly than the average overall. Nationally, in 1995/96 London homes were 32 per cent more costly than the average overall (Netten and Dennett, 1997).

⁶ Based on uprated 1995/96 expenditure and activity data reported in Netten and Dennett (1997).

Table 4.14: Unit costs per resident week by local authority type

<i>Authority type</i>	<i>Unit costs per resident week</i>			<i>Number of homes</i>
	<i>Average</i>	<i>Highest</i>	<i>Lowest</i>	
London	412	629	315	19
Metropolitan districts	282	577	184	44
Counties	281	498	162	98
All homes	297	629	162	161

Box 4.2 describes the potential sources of variation explored in the analysis. As we can observe costs directly, many of the issues discussed in previous sections in this chapter are not relevant to the analysis.

Factors expected to affect cost are the characteristics of the resident in terms of age, gender, and physical and cognitive impairment. Home characteristics which would be expected to influence costs include capacity, occupancy, turnover and intermediate outputs (what the home provides for residents and quality of care). The resident and home characteristics that were found to be associated with costs are described below. As capital costs are excluded from the analysis the only relevant price of inputs is the wage rate.

Box 4.2: Influences on local authority home costs

Cost of inputs

Basic wage rates

Resident characteristics

Physical impairment

Cognitive impairment

Nursing needs

Home characteristics

Size of home

Design of home (group living or semi-group living)

Occupancy, turnover of residents

What the home provides for non-residents (e.g. day care, multi-purpose use of homes)

What the home provides for residents (e.g. short-term care, specialisms, physiotherapy)

Quality of care (e.g. proportion of single rooms, level of activities, degree to which independence is encouraged)

Staff characteristics (e.g. qualifications, ongoing training)

Use of volunteers

Regional variations

Type of authority

Regional variations in wage rates

Table 4.15 presents the effect of a unit change in the variable described in terms of the percentage change in unit cost. Where the variable is expressed as a proportion (for example, percent of residents who are severely confused) the unit change is one per cent. Where the variable is continuous (for example, number of places) then the unit change is one per cent change from the mean value. Where the variable is a dummy (for example, day care is provided or the home is in London) the unit change is an indicator that the factor is present rather than absent. The values of the variables used in the analysis are shown in table A4.13 and the regression results are shown in tables A4.14 and A4.15 in the chapter annex.

Table 4.15: Cost function estimation for local authority homes

<i>Changes in independent variable</i>	<i>Association with cost as % of sample average cost</i>	
	<i>Model 1</i>	<i>Model 2</i>
<i>Client characteristics</i>		
+1% in most severely dependent DHSS4 category	-	+0.35***
+1% residents severely confused	+0.24***	-
+1% residents both severely confused & severely dependent (Barthel <4)	+0.42***	-
+1% residents short stay when more than 17% residents are short stay	+0.35***	+0.32***
<i>Home characteristics</i>		
+1% number of places	-0.59***	-0.57***
+1% occupancy	-1.22***	-1.20***
Over 35 sessions of day care per week	+6.55*	+7.34**
+1% Independence score	+0.32***	+0.30**
+1% Organisation score	-0.33***	-0.32***
<i>Location characteristics</i>		
Home is in London	+46.43***	+48.52***
Adjusted R ²	0.801	0.785
<p>Key: *** Significant at 1 per cent level or better ** Significant at 5 per cent level or better * Significant at 10 per cent level or better n = 141</p>		

Note: 1. Mean cost per week per resident £299.

Two models are presented. The first model is based on the use of Barthel and the grouped MDS CPS score to indicate physical and cognitive impairment respectively. This is the better model in terms of specification and explanatory power, and allows comparison with the analyses of the independent sector in earlier sections. For the most part, the results of this model are described in the discussion below. The second model uses the DHSS4 dependency grouping described in Chapter 2. This model satisfies statistical tests of specification and allows comparisons with changes in dependency over time.

4.5.1 Resident characteristics

The two models reflect different approaches to measuring dependency. The first model, which uses the Barthel Index and the grouped MDS CPS measure of cognitive impairment, shows that the level of cognitive impairment prevalent in the home dominates costs. An increase in the proportion of people with severe dementia (on average about 26 per cent in these homes) by one per cent increases average cost by 0.24 per cent or £0.70 per week. If the proportion who are severely impaired both mentally and physically (on average about 7 per cent) increases by one per cent then costs rise by 0.42 per cent or £1.27 per week. Thus the impact of admitting one severely demented and physically impaired elderly person to an average home with 37 residents is to raise average costs in the home by £5.40 per week.

In the DHSS4 classification, indicators of cognitive and physical impairment are combined in a single measure. An increase of one per cent in the DHSS4 highest dependency group results in a cost rise of 0.35 per cent or £1.05 per week. On the basis of this model admitting one resident in this dependency group would raise average costs by £2.90 per week. The implications of this for the observed rise in costs over time are discussed in section 4.5.3 below.

4.5.2 Home characteristics

Size of home and occupancy

On average, homes included in the analysis had 37 beds. Table 4.15 shows that, at this average size, one per cent increase in number of places results in 0.6 per cent reduction in costs. This is the equivalent to 1.6 per cent or £4.70 per week reduction in costs for every additional bed. There is a non-linear relationship with size. Sixty-bedded homes were the least costly and homes with less than 20 beds the most costly, when all other factors are held constant.

The average level of occupancy in the homes included in the analysis was 91 per cent. As with the other variables included in the analyses there is an underlying assumption that this reflects the average level throughout the year. Table 4.15 shows that costs are very sensitive to occupancy levels. With a one per cent increase in occupancy, the average unit cost decreases by *more* than one per cent: the equivalent of £3.70 per week per resident.

Day care

Where day care costs for non-residents are included these need to be allowed for when investigating the costs of caring for residents. For those homes where the level of day care provided is relatively low, there is no discernible effect on the unit costs for residents. Once more than 35 sessions per week are provided (the equivalent of seven people attending five days a week) then there is an impact on costs. Further analyses revealed a non-linear relationship with costs when day care was provided above this level but for the purposes here the overall impact is indicated by a the provision

or non-provision of high levels of day care. When this is provided costs of residential care appears to be 6.5 per cent higher (£19 per week).

Short-term care

As with day care, the impact of short-term care on costs is not evident until provision reaches a certain level. When the proportion of residents who are short-term is less than 17 per cent (the equivalent of five or less in a 30 place home) there is no significant effect on the average costs of care. Thirty homes or 19 per cent of the sample had a higher proportion of resident who were short-term. For these homes costs do increase as the proportion of short-term residents rises. The overall effect of this is reported in table 4.15. The rise in average costs is 0.35 per cent for all residents in the home (£1 per week) as a result of a one per cent rise in the proportion of short-term residents. Allocating these costs to the short-stay residents means that in an average size home (37 places), one additional short-stay resident is predicted to cost five per cent or £14 more than a permanent resident (i.e. £313 per week compared with £299).

Quality of care

Theoretically quality of care provided is associated with costs. A number of indicators that would be expected to affect costs were investigated (see Box 4.2). The only factors that were significantly associated with weekly costs once other factors had been taken into consideration were two SCES indicators of the social climate (see Chapter 3 for a description of these). The level to which the environment fostered Independence was associated with higher costs: for every one per cent increase in the scale unit costs rose by 0.3 per cent or £0.90 more per week. A reduction was associated with higher levels of Organization (-0.34 per cent or £1.00 per week).

These directions of effect are what would be expected. Independence is an indicator of the degree to which people are encouraged to do things for themselves and is an important element of quality of care. The effect of Organization could be interpreted either as more efficiently run homes having a clearer sense of order for residents or as more routinised practices resulting in both lower costs and a more rigid environment for residents. It is of interest to note that both of these indicators are significantly higher in privately run residential care (see Chapter 3) where there are considerably lower costs.

4.5.3 Regional variation

Overall, the most striking result and the largest single influence is the effect of London. With London homes being 46 per cent more costly than non-London homes, after adjusting for differences in client and home characteristics, clearly the difference between the costs of London and non-London homes is not due to differences in the type of residents cared for. Although labour costs are higher in London, the difference is not accounted for by variations in basic rates of pay to care staff or national variations in the female wage rate. Including these variables in the model reduces the London effect slightly but in both cases they are non-significant. See Chapter 5 for a discussion about the effect of London on costs.

4.6 Changes in Local Authority Costs over Time

Darton and Knapp (1986) report an analysis of local authority home costs based on similar data collected in 1981. At that time average unit costs were £116 per week. The nature of provision has changed in the intervening period so it is not possible to replicate the earlier analysis. For example, one significant predictor at that time was single sex provision. None of the homes in the current sample catered for just men or women. Moreover the relationship between costs and capacity was found to depend on whether homes were designed for group living in the earlier analyses. The relationship between costs and capacity was so similar in group and non-group-living homes that the distinction has not been made in the current analyses. What it is possible to do, however, is to predict the costs of caring for the levels of dependency prevailing in 1981 given the current relationship between costs and other factors in current provision.

In 1981, the proportion of residents in the highest category of the DHSS 4-category dependency measure was 28 per cent. This compares to 42 per cent in the homes analysed. On the basis of the current analyses, holding all other factors constant the average cost of caring for the 1981 population would be £285 per week. Adjusting this to reflect 1981 prices (using the Personal Social Services Pay and Prices Index) the average cost would be £130 per week. Thus, once adjustment is made for changes in dependency and prices, current costs are 12 per cent higher than would be expected.

This result must be treated with some caution. The greater the change in the proportion of people who are severely dependent the less confident we can be that the relationship with costs still holds. Moreover, there are clearly other factors that have changed which have not been allowed for. The model presented which uses the MDS CPS groups and the Barthel Index showed a stronger relationship between dependency characteristics and costs, so it may be that some of the cost implications of changes in dependency have not been identified. There are other changes, in particular the increased use of homes for short-stay residents which have not been taken into consideration. No data are currently available about the level and distribution of short-stay residents

in local authority homes in 1981 to allow an estimate to be made of the impact on costs of increased provision of short-term care.

4.7 Summary

The analysis of costs and prices in the independent sector found:

- Relatively modest mark-up rates of price over cost at around 10 per cent.
- A significant relationship between price and Barthel as a measure of dependency, although the effects were very small and non-linear.
- Larger effects of dependency on cost (compared to price and dependency associations), which may be due to price setting behaviour of local authorities.
- Overall the large dislocation between nursing and residential care prices convolutes the relationship between dependency and both prices and costs.
- Private payers appear to pay higher prices than local authorities for independent provision.
- Voluntary sector residential prices were more sensitive to dependency variations and lower.
- Prices were very sensitive to variations in labour costs (local market wage rate).
- Competition effects were in evidence, but the market already appears pretty competitive.
- Local authority pricing policies do have significant effects. An interpretation that fits the data is that fixed prices are high in nursing care and low in residential care, although other factors are certainly relevant and the result should be treated with caution.

The analysis of costs of local authority provision found:

- A strong relationship between the proportion of residents severely cognitive impaired and cost.
- Costs were very sensitive to level of occupancy.
- Costs were minimised in 60-bedded homes.
- That where day care was included it only had a significant impact on the estimated costs of caring for residents when more than 35 sessions per week were provided.
- The impact of short-term care on costs was observable once more than 17 per cent (the equivalent of more than five residents in a 30-bedded home). In an average size home short-term residents cost 5 per cent more than permanent residents.
- Two indicators of social climate were found to be significantly associated with the costs of care. The more the environment fostered Independence the higher the cost, and the higher the level of Organization the lower the cost.

- At 46 per cent the differential between London and non-London costs was far higher than in the independent sector, and remained so after allowing for resident and home characteristics.
- Adjusting for price differentials and changes in dependency accounted for most of the difference in unit costs in local authority care between 1981 and 1996. The remaining 12 per cent will in part be due to unmeasured changes in dependency and the increased provision of short-term care.

Annex

Table A4.1: Nursing home functions

Type	Variable	Reduced-form price	Demand	Cost
↑ Cost	Dependency: Bart. score (log) LA Fund*Bart. Score Mild confusion Severe confusion Confusion (log)	Bart. score (log) LA Fund*Bart. Score		Bart. score (log) LA Fund*Bart. score Mild confusion Severe confusion Confusion (log)
	Product chars: Places sold (log) Single rms per bed Not on LA list Single home org. Purpose built Built from scratch Terminal care pr'd MH care pr'd Purpose built*Scratch High % privately-funded home High % LA funded home Monthly trips	Single rms per bed Not on LA list Single home org. Purpose built Built from scratch MH care pr'd	Places sold (log) Single rms per bed Purpose built Terminal care pr'd Monthly trips	Single rms per bed Single home org. Purpose built Terminal care pr'd Purpose built*Scratch High % privately-funded home High % LA funded home
↓ Demand	LA: Female wage rate Nurse places in LA by LA pop. Local GDP LA population (log) LA population	Female wage rate Nurse places in LA by LA pop.	Local GDP LA population (log) LA population	(fixed effects)
	Comm/Contract: LA has fixed price LA has fixed price*Non Lon LAs Variable contr. price Variable contr. price*Pop. density % LA funded % privately funded	LA has fixed price LA has fixed price*Non Lon LAs % LA funded	Variable contr. price Variable contr. price*Pop. den. % privately funded	

Table A4.2: Residential care home functions

Type	Variable	Reduced-form price	Demand	Cost
↑ Cost	Dependency: Bart. score (log) Barthel score squared Confusion (log) Barthel score*Priv. Home	Bart. score (log) Barthel score squared Barthel score*Priv. home		Bart. score (log) Barthel score squared Confusion (log) Barthel score*Priv. home
	Product chars: Places sold (log) Purpose built Built from scratch % single room*purpose built Purpose built*Scratch High % privately-funded home High % LA funded home Monthly trips Private home Private fund %*Priv. home Small home Large home	Purpose built Built from scratch % single room*purpose built Private home Small home	Places sold (log) Purpose built Monthly trips Private fund %*Priv. home Small home Large home	Purpose built Purpose built*Scratch High % privately-funded home High % LA funded home Private home
	LA: Female wage rate Pop. density*Tot LA places by LA pop Local GDP LA population (log) LA population Population density	Female wage rate Pop. density*Tot LA places by LA pop LA population (log) LA population	Local GDP Population density	(fixed effects)
	Comm/Contract: Variable contr. price Price independent of dependency % privately funded % privately funded (log)	Price independent of dependency % privately funded % privately funded (log)	Variable contr. price Price independent of dependency	
↓ Demand				

Table A4.3: Descriptive statistics - nursing home sample data

<i>Variable</i>	<i>Mean</i>	<i>Std dev.</i>	<i>Min.</i>	<i>Max.</i>
<i>Dependency characteristics</i>				
Barthel score (log)	1.9240	0.3720	0.5878	2.9098
LA Fund*Barthel score	17936.1863	21655.3596	0.0000	174969.0156
Mild confusion	14.5785	13.5810	0.0000	63.1579
Severe confusion	43.0499	17.6905	0.0000	100.0000
Confusion (log)	2.0818	1.4041	0.0000	4.1613
<i>Product characteristics</i>				
Places sold (log)	3.4978	0.5446	2.0794	5.2781
Price (log)	5.8018	0.1379	5.6247	6.5586
Single rooms per bed	0.6327	0.2758	0.0303	1.5556
Not on LA list	0.3537	0.4798	0.0000	1.0000
Purpose built	0.3810	0.4873	0.0000	1.0000
Built from scratch	0.5238	0.5011	0.0000	1.0000
Terminal care provided	0.1429	0.3511	0.0000	1.0000
MH care provided	0.1837	0.3885	0.0000	1.0000
Purpose built*Scratch	0.2789	0.4500	0.0000	1.0000
Monthly trips	0.4521	0.4994	0.0000	1.0000
High % privately-funded home	0.0816	0.2747	0.0000	1.0000
High % LA funded home	0.3673	0.4837	0.0000	1.0000
<i>Local authority characteristics</i>				
Female wage rate	273.7959	39.6309	243.3000	364.9000
Nurse places in LA by LA pop.	0.0040	0.0020	0.0010	0.0093
Local GDP	100.6680	20.3820	75.6000	144.7000
LA population (log)	13.2151	0.6518	11.9492	14.2269
LA population	665608.5034	391577.2094	154697.0000	*****
<i>Commissioning/contract</i>				
LA has fixed price	0.2041	0.4044	0.0000	1.0000
LA has fixed price*Non Lon LAs	0.1701	0.3770	0.0000	1.0000
Variable contr. price	0.2132	0.4111	0.0000	1.0000
Variable contr. price*Pop. density	27.5197	186.1363	0.0000	1874.1238
% LA funded	41.9447	26.7683	0.0000	100.0000
% privately funded	23.0073	19.3936	0.0000	90.0000

n = 147

Table A4.4: Descriptive statistics - independent residential care sample data

<i>Variable</i>	<i>Mean</i>	<i>Std dev.</i>	<i>Min.</i>	<i>Max.</i>
<i>Dependency characteristics</i>				
Barthel score (log)	2.5840	0.1952	1.5099	2.9730
Barthel score squared	187.5955	63.8725	20.4875	382.2025
Confusion (log)	3.1575	1.1616	0.0000	4.4451
Barthel score*Private Home	7.0816	6.9490	0.0000	18.5000
<i>Product characteristics</i>				
Places sold (log)	3.1061	0.5643	1.0986	4.5539
Price per week (log)	5.4571	0.1405	4.9345	6.0008
Private home	0.5236	0.5008	0.0000	1.0000
% single rooms	0.7749	0.2044	0.0000	1.0625
Purpose built	0.3403	0.4860	0.0000	1.0000
Built from scratch	0.4555	0.4993	0.0000	1.0000
% single room*purpose built	0.2947	0.4307	0.0000	1.0000
Purpose built*Scratch	0.1728	0.3790	0.0000	1.0000
Monthly trips	0.4503	0.4988	0.0000	1.0000
Small home	0.1152	0.3201	0.0000	1.0000
Large home	0.1361	0.3438	0.0000	1.0000
Private fund %*Private home	17.3955	22.7436	0.0000	100.0000
High % privately-funded home	0.2251	0.4188	0.0000	1.0000
High % LA funded home	0.2670	0.4436	0.0000	1.0000
<i>Local authority characteristics</i>				
Female wage rate	272.9141	36.3568	243.3000	364.9000
Pop. Density*Tot LA places by LA pop.	12.6813	14.1187	1.6238	41.4575
Local GDP	98.2780	18.7608	75.6000	144.7000
LA population (log)	13.3468	0.6929	11.9492	14.2269
LA population	774371.0838	463495.8467	154697.0000	*****
Population density	1274.1567	1695.0163	138.7962	6740.1333
<i>Commissioning/contract</i>				
Variable contr. price	0.1780	0.3835	0.0000	1.0000
Price independent of dependency	0.4346	0.4970	0.0000	1.0000
% privately funded (log)	3.1540	1.1466	0.0000	4.6151
% privately funded	34.0544	24.1276	0.0000	100.0000

n = 199

Independent sector estimation

The figures in tables A4.5 and A4.6 below show the (inverse) elasticity of demand, that is, the percentage change in price associated with a one per cent change in places sold around the sample mean values for nursing and residential care output (places sold).

Table A4.5: Demand function - nursing care

<i>Variable</i>	<i>Elasticity</i>
<i>Product characteristics</i>	
Places sold (log)	-0.093
Single rooms (per bed)	0.068
Terminal care beds committed	0.005
Frequent trips for residents	0.023
Purpose built	0.024
<i>Local authority characteristics</i>	
Local area GDP	0.408
LA population	0.002
<i>Commissioning/purchasing</i>	
Price set on per-client basis	-0.013
Price set on per-client basis - London	-0.010
Price set on per-client basis - Non-London	-0.013
% privately funded	0.083

Table A4.6: Demand function - residential care

<i>Variable</i>	<i>Elasticity</i>
<i>Product characteristics</i>	
Places sold (log)	-0.118
Purpose built	0.021
Small home (<15 places)	-0.015
Large home (>40 places)	0.013
<i>Local authority characteristics</i>	
Local area GDP	0.357
LA population density	0.019
<i>Commissioning/purchasing</i>	
Price set independently of client	-0.016
% privately funded*private home	0.017

Information regarding the slope of the demand curve estimated in the demand analysis can be used to derive values of mark-up. The theoretical underpinnings of this calculation are available in Forder (1998a). The elasticity estimates are described in tables A4.7 and A4.8 (note that rounding errors account for the slight differences between mean elasticities in tables A4.7 and A4.8 compared with those reported in tables A4.5 and A4.6). Mark-up can be subtracted from price to give marginal cost, the mean values of which are also reported in tables A4.7 and A4.8.

Table A4.7: Elasticity and marginal cost - nursing homes

<i>Variable</i>	<i>Mean</i>	<i>Std dev.</i>	<i>Min.</i>	<i>Max.</i>
Elasticity	-0.0943	0.0272	-0.1828	0.0051
Marginal cost	305.1303	58.8467	238.4817	693.6316
Price	334.0369	54.3588	277.1875	705.2632

n = 137

Table A4.8: Elasticity and marginal cost - residential homes

<i>Variable</i>	<i>Mean</i>	<i>Std dev.</i>	<i>Min.</i>	<i>Max.</i>
Elasticity	-0.1189	0.0383	-0.2664	0.0124
Marginal cost	210.1617	40.1336	105.0994	389.6385
Price	236.5804	37.2137	139.0000	403.7647

n =199

The elasticities figures are estimated whilst controlling for other demand factors as listed in tables A4.5 and A4.6, covering home characteristics, local authority characteristics and commissioning/purchasing factors. Information about costs was used to isolate the variations in price as associated with differences in output between homes that are (theoretically) demand-related from those which are cost-related.

A marginal cost function was estimated using a fixed effects regression model (to tackle multi-level effects).

The price - dependency relationship at the mean is a linear approximation that is valid only for very small variations around the mean value.

Table A4.9: Diagnostic statistics - nursing home reduced-form price estimation

<i>Diagnostic statistic</i>	
Ordinary least squares regression	
Model Fit:	
R squared	0.650
Adjusted R squared	0.615
Model Test:	
Overall fit - F(13, 133)	18.97***
Heteroskedasticity: Breusch-Pagan LM test, chi squared (13)	99.015***
Mis-specification: Ramsey's Reset test, F(15, 1, 132)	3.754 (NS)

Table A4.10: Diagnostic statistics - residential care home reduced-form price estimation

<i>Diagnostic statistic</i>	
Ordinary least squares regression Model Fit: R squared Adjusted R squared Model Test: Overall fit - F(15, 175) Heteroskedasticity: Breusch-Pagan LM test, chi squared (15) Mis-specification: Ramsey's Reset test, F(17, 1, 174)	 0.518 0.476 12.51*** 68.774*** 1.568 (NS)

Table A4.11: Diagnostic statistics - nursing home demand function

<i>Diagnostic statistic</i>	
Two stage least squares regression Model Fit: R squared [Note: not bounded in [0,1]] Adjusted R squared Model Test: Overall fit - F(11, 125) Heteroskedasticity: Breusch-Pagan LM test, chi squared (11) Mis-specification: Hausman LM test, chi squared (20, 137)	 0.584 0.547 15.92*** p<0.001 13.84 (NS)

Table A4.12: Diagnostic statistics - residential care home demand function

<i>Diagnostic statistic</i>	
Two stage least squares regression Model Fit: R squared [Note: not bounded in [0,1]] Adjusted R squared Model Test: Overall fit - F(10, 180) Heteroskedasticity: Breusch-Pagan LM test, chi squared (10) Mis-specification: Hausman LM test, chi squared (18,191)	 0.347 0.311 9.57*** p<0.001 19.98 (NS)

Local authority estimation

Table A4.13: Descriptive statistics - local authority sample data

<i>Variable</i>	<i>Mean</i>	<i>Std dev.</i>	<i>Min.</i>	<i>Max.</i>
% residents severely confused	25.726	18.772	0.00	100.00
% residents both severely confused and severely dependent (Barthel <4)	6.610	9.631	0.00	70.00
% in most severely dependent DHSS4 category	41.807	18.513	0.00	100.00
% occupancy	91.0432	10.4997	55.26	100.00
% number of places	37.35	9.01	16	66
% number of places ²	1476.05	678.6136	256.00	4356.00
Over 35 sessions of day care per week	0.1277	0.3349	0.00	1.00
% residents short stay when more than 17% residents are short stay	5.6387	13.6788	0.00	58.33
% Organization score	60.6482	13.3045	23.89	95.11
% Independence score	39.5256	11.0711	16.67	67.78
Home is in London	0.1064	0.3094	0.00	1.00

Chapter 5

Implications for Standard Spending Assessments: Needs and the Survey of Admissions

5.1 Introduction

This is the first of two chapters concerned with the implications of the survey for Standard Spending Assessments (SSAs), the formulae used for distributing Revenue Support Grant from central to local government. Bebbington et al. (1995) and Netten (1997) described a number of ways in which a survey of residential and nursing home care could make a useful contribution to these formulae. These concern factors that may produce unavoidable variations between local authorities in the cost of providing the residential and nursing home care for which they are responsible, which are outside the control of local authorities. The first concerns demand - the level of need for publicly funded care among the elderly population for which the local authority is responsible: and the second concerns supply: factors which affect the price of providing that care. This chapter is concerned with the first of these.

In 1996 the PSSRU undertook a survey of people being admitted to a supported place in residential and nursing homes which was the basis of proposals for a new need formula for SSAs (Bebbington et al., 1996). However, because this was a study of admissions at a specific point in time, it was necessary to make certain assumptions as part of the analysis. The present survey is able to provide checks on some of these assumptions, and this is the subject of this chapter. These include the following:

- That assumptions about the long-run cost consequences of admissions made for the formulae are essentially correct (section 5.2).
- Whether the circumstances of people in the local community is an appropriate indicator of the demand for supported residential/nursing home care (section 5.3).
- Whether taking more specific account of short-stay residents would affect formulae (section 5.4).

Section 5.5 summarises.

5.2 The Long-Run Consequences of Admission

The survey of admissions on which current SSA needs formulae are based was designed to be nationally representative of first admissions of people to long-stay supported care. (In the event it could not represent those who had already been in institutions for some time and required slight reweighting to compensate for slightly over-representing metropolitan boroughs.) However, this did not necessarily make it representative of the demand for care. Bebbington et al. (1995, §2.9) argued about admissions:

Although some people stay many years and have high cost consequences, many others leave very quickly. ... It is therefore appropriate to give more weight to individuals admitted for a long stay than those admitted for a short stay in estimating costs. A cross-sectional survey is self-weighting in relation to length of stay.

As a pragmatic compromise, the SSA analysis was based on all those who stayed in a care home for at least a month, omitting all short term cases, and those who died quickly or who left for other reasons.

A cross-sectional survey is approximately self-weighting in the following sense. Let us suppose that the resident population is made up of different types of people (defined with regard to dependency characteristics on admission) who tend to stay different lengths of time. Then provided the sample is nationally representative with respect to these types, and the resident population is stable, that is the rate of admissions is constant through time and the balance between the types of people is not changing either, then each type of person will be represented in the sample approximately according to the length of time they on average stay. This will also make a cross-sectional survey self weighting with regard to the balance between different types of care, for example residential and nursing home care, which may be important if the rate of admissions to the different types of home is different from the balance in the numbers in these homes because of different lengths of stay.

The check on the admissions survey that was therefore proposed was of the match between the types of people and those in the cross-sectional survey. Tables 5.1 and 5.2 compare the unweighted data from the admissions sample with long-stay local authority funded residents in the cross-sectional survey sample in terms of age, gender, source of admission and dependency characteristics. The comparison shown is between admissions to and residents of each home type, since the cross-sectional survey was stratified to ensure an adequate number of each type of home (although as elsewhere in this report, it would have been possible to have used DH RA Statistics, 1997, to reweight home to make the sample nationally representative of residents).

Table 5.1 shows three differences between supported residents and those that are newly admitted in demographic profile:

- In all types of homes there are a slightly higher proportion of female supported residents than among the new admissions.
- More new admissions come direct from hospital, fewer from private households, than among residents.
- Residents are slightly older than new admissions.

All these can be explained by factors associated with length of stay. Men survive less well than women, those from hospitals worse than those from private households (Bebbington et al., 1998). People in these two groups are also a little more likely to leave for other reasons.

Table 5.2 shows that there is very little to distinguish admissions and current population in terms of cognitive impairment or behavioural problems. In terms of physical dependency the Barthel distribution in most types of home showed higher proportions in both the most dependent and least dependent categories among residents compared with admissions. This may also be consistent with factors associated with survival: more dependent admissions dying or leaving homes during the first six months. The higher proportion in the high dependency category could be a result of homes maintaining people for longer at a higher level of dependency than those admitted from the community.

The number of variables which are available at a national level for all authorities which may be obtained for people in residential and nursing home care is limited. This was an important factor in the analyses which were intended to feed in to thinking about revisions to the existing SSD formula for residential care for elderly people (Bebbington et al., 1996). This factor is also relevant when considering whether there are any potential sources of bias in using a sample of admissions which does not allow for the characteristics of the existing population. There are just two variables included in the actual formula which can be compared. There is no obvious cause for concern about either as there are no important differences in terms of age or proportions admitted from single person (rather than shared) households.

It would be practicable to standardise the admissions sample to reflect the differences in gender, source of admission and Barthel score, to reflect the distribution of supported residents in cross-section at a national level. However, on this evidence it would be most unlikely to make any significant difference to the formulae in Bebbington et al. (1996).

5.3 Circumstances of People in the Community and the Demand for Care

The logic of the method for developing need indicators is to identify the number of elderly people living in the local community who have similar characteristics to those who are admitted, and therefore to some degree may be regarded as at risk, either now or in the future. Bebbington et al. (1995, §2.6) argued that not all the demand for residential and nursing care that a local authority might face would necessarily be reflected in the community. One potential source of this are elderly people who migrate into communal establishments as private funders, who subsequently seek local authority support.

The evidence to date suggests that very few residents each year become dependent on public funding (numbers equating to less than two per cent of places, three per cent of permanent residents) and that the issue is focused on people in residential rather than nursing home care. The distribution of DSS and local authority responsibilities would be consistent with about half of those residents requiring public funding approaching local authorities. In the admissions survey just two per cent of the sample were privately-funded residents when assessed.

The proportion of all publicly-funded residents in the cross-sectional survey who were identified as spend-down cases during their stay was 14 per cent. If the higher level of dependency of local authority admissions is maintained, (and in the absence of any important changes in policy) the proportion of residents supported by local authorities that were admitted as privately funded would probably be rather higher than this in the long-term.

5.4 Short-Stay Residents

A final issue raised with respect to SSAs was the relative importance of short-stay residents in the provision of care for elderly people. The current method does not specifically make any allowance for geographical differences in need for short-term care in the SSA formulae. Whether this is an important issue depends on both of two things:

- The cost implications of short term residents vis-à-vis long stay residents.
- Whether the distribution of demand for short stay care is very different from that of long-stay care, as between local authorities.

Chapter 3 of the present report discussed the funding and distribution of types of resident. In the sample as a whole 3 per cent of residents were short-stay, two-thirds of whom were publicly-funded. Of local authority funded residents 3.6 per cent were short-stay. Short-stay residents were

primarily located in local authority homes. National figures show four per cent of elderly residents in residential care as short-term cases but there is no corresponding national information about nursing home residents.

Adjusting for the national picture in terms of numbers of residents in each type of home, the proportion of residents who are short-stay at any one time is 3.6 per cent. The survey found that on average short-term residents stayed 17.7 days. Among publicly-funded residents 63 per cent of short-term placements were 14 days or less, 25 per cent for exactly two weeks.

Table 5.3 shows that in 24 per cent of cases home managers did not know whether the short-stay resident was a regular user of short-term care. Of the remaining cases, however, the majority were regular users, with 56 per cent having visited the home before, while 21 per cent were on their first visit, with the intention that it should become regular. At 17 days on average, length of stay among regular visitors was shorter than for those who are not regular (20 days).

Even if short-stay residents are a little more costly than long-stay residents per resident week - and the majority of short-stay placements were in local authority homes, which are more costly than private homes - no more than five per cent of total annual expenditure on residential care would be associated with short-stay residents. The relatively high proportion of residents who were regular visitors to homes implies that the number of individuals affected is considerably less than the numbers of short-term admissions per year. In the absence of information about numbers and distribution of stays per regular user, however, it is not possible to estimate the number of people using short-stay care.

Whether or not local authorities have a different pattern of need for short stay care compared with long stay care is beyond the scope of our enquiry. But certainly there is quite extraordinary variation in demand, if the number of short-stay admissions during the year are compared with the number of supported residents in March 1996 (Department of Health, 1997c). At one extreme, Berkshire, Cambridgeshire, Bradford, Sefton, Bexley and Bromley have twice as many short-stay admissions as residents. At the other extreme, Durham, Gateshead, Liverpool, Manchester, Sunderland, Wigan, Brent, Ealing and almost all the Inner London boroughs have less than half. It is not obvious why inner city areas have such low demand for short term care, but it may be that these areas tend to substitute domiciliary care for short-term residential care.

5.5 Conclusion

A variety of hypothesised patterns of activity and relationships which might have SSA implications have been investigated. The evidence suggests that:

- There are no pressing concerns with respect to biases in previous analyses designed to feed into the SSA formulae arising from the lack of data about the resident population. However some differences do occur which it will be possible to examine further when evidence from the longitudinal component of the admissions survey becomes available.
- Spend-down does not appear to be a pressing issue in the short-term. Further work on the length of stay of spend-down cases put together with future analyses about predictors of length of stay and characteristics of privately-funded admissions may help illuminate the long-term implications of this issue.
- Short-term placements represent too small a proportion of total residential care expenditure to warrant separate treatment within SSAs, but the wide variation in the use of such placement is curious.

Table 5.1: Demographic characteristics of residents and admissions by home type

	<i>Local authority homes</i>		<i>Voluntary homes</i>		<i>Private homes</i>		<i>Nursing homes</i>		<i>All homes</i>	
	<i>Residents</i>	<i>Admissions</i>	<i>Residents</i>	<i>Admissions</i>	<i>Residents</i>	<i>Admissions</i>	<i>Residents</i>	<i>Admissions</i>	<i>Residents</i>	<i>Admissions</i>
Number of residents	1493	214	1271	252	725	905	2477	1173	6592	2544
Gender										
% female	74.0	69.2	78.4	72.6	76.2	74.7	75.4	67.8	75.9	70.9
Age group (%)										
65-69	1.5	1.9	1.1	3.2	2.6	2.6	4.3	4.1	2.6	3.3
70-74	7.9	8.4	9.2	9.6	6.6	8.1	9.4	9.8	8.5	9.1
75-79	12.8	15.0	11.9	11.2	12.4	15.0	15.7	19.1	13.6	16.5
80-84	24.3	31.3	25.0	23.3	26.8	26.3	21.2	25.5	23.8	26.1
85 and over	53.4	43.5	52.8	52.6	51.6	48.0	49.3	41.4	51.5	45.0
Source of admission (%)										
Private household	57.9	44.4	52.2	39.7	37.9	34.9	24.2	17.7	41.1	28.3
Sheltered housing	9.8	7.9	11.1	9.5	7.4	7.4	3.9	1.9	7.6	5.1
Residential home	11.9	7.9	8.0	7.9	10.1	9.9	8.6	11.4	9.6	10.3
Nursing home	0.4	0.9	0.9	1.6	1.7	1.5	5.9	4.2	2.7	2.7
Hospital	17.9	38.8	25.7	39.3	41.5	44.6	57.1	63.2	37.7	52.2
Other	2.1	0	2.1	2.0	1.4	1.5	0.3	1.5	1.3	1.5
Household type										
% single person	67.9	69.3	77.9	66.9	68.2	71.2	51.6	53.5	67.5	63.5

Table 5.2: Dependency characteristics of residents and admissions by home type

	<i>Local authority homes</i>		<i>Voluntary homes</i>		<i>Private homes</i>		<i>Nursing homes</i>		<i>All homes</i>	
	<i>Residents</i>	<i>Admissions</i>	<i>Residents</i>	<i>Admissions</i>	<i>Residents</i>	<i>Admissions</i>	<i>Residents</i>	<i>Admissions</i>	<i>Residents</i>	<i>Admissions</i>
Number of residents	1493	214	1259	252	723	905	2466	1170	6572	2541
Barthel Index of ADL (%)										
Score >12	59.7	58.9	54.5	45.2	61.7	51.7	18.8	12.8	41.0	33.8
Score 9-12	16.3	28.5	17.6	30.6	18.9	28.0	12.7	18.7	15.7	24.0
Score 5-8	12.7	10.7	16.0	17.9	10.5	16.0	25.4	32.2	18.8	23.2
Score 0-4	11.3	1.9	12.0	6.3	9.0	4.3	43.2	36.3	24.5	19.0
Confusion (%)										
Intact	27.5	23.7	25.7	18.8	28.0	22.1	13.9	18.0	21.7	20.1
Mild impairment	47.5	47.9	47.5	48.8	49.6	54.1	44.5	36.3	46.8	45.0
Severe impairment	25.0	28.4	26.8	32.4	22.4	23.8	41.6	45.7	31.5	34.9
Antisocial behaviour (%)										
Never/unusual	65.9	66.4	64.2	59.8	67.8	69.2	64.0	64.3	65.5	65.8
Sometimes (>weekly)	23.4	22.3	23.5	23.5	20.2	18.9	20.8	19.8	21.7	20.0
Frequently (daily)	10.7	11.4	12.3	16.7	12.0	12.0	15.2	15.9	12.7	14.2

Table 5.3: Length and regularity of stay of short-stay residents

	<i>No.</i>	<i>%</i>	<i>Average length of stay (days)</i>
Regular short-stay resident	311	55.9	16.0
First visit - intending to be regular	116	20.8	19.9
First visit - no intention for regular visits	67	12.0	14.9
Does not stay regularly	63	11.3	25.0
Not known	183	-	-
Total	740	100	17.7

Chapter 6

Implications for Standard Spending Assessments: Costs and the Area Cost Adjustment

6.1 Introduction

This is the second chapter concerned with the implications of the residential care survey to standard spending assessments (SSA), the method of calculating revenue support grant to local authorities. Chapter 5 dealt with needs: this chapter is concerned with costs. Its aim is to examine evidence about area cost variations in residential and nursing care, based on the survey, and to consider the implications for the Area Cost Adjustment (ACA). This is the element in the calculation of grant that allows for local variations in input prices. The ACA is intended to compensate authorities for unavoidable differences in the cost of providing services at a standard level, and in practice allows principally for higher labour costs in London and nearby.

It is not the purpose of this chapter to propose a new approach to the ACA, but rather to raise issues on the basis of the survey evidence which should be considered next time the ACA is reviewed. Since Area Cost Adjustments underwent a major review in 1996, this chapter examines the appropriateness of their conclusions, as they would seem to apply to the SSA for residential care. In particular it addresses two assumptions. The first, which concerns the main part of the chapter, is about the assumption that the equilibrium price of labour in an area can best be gauged using evidence from the private sector generally. It is argued that there is too much discrepancy between the price variations produced by this method and the actual local cost variations for residential care. The second, which is more briefly addressed, concerns whether *local* prices are entirely relevant to the ACA for residential care, since many people are actually placed away from the locality.

Section 6.2 describes the rationale for the ACA.

Section 6.3 outlines the review of the ACA which took place in 1996 (Elliott et al, 1996), and the criticisms which led up to it. The review supported the basis of the existing approach, though with some significant modifications. This approach assumes that variations in the wage rates of staff in the private sector generally reflect the equilibrium wage rates for staff in residential and nursing home care as well as other services.

Section 6.4 argues that direct comparisons between the public and private sectors of residential and nursing home care fall within the logic of the ACA rationale and can provide evidence relevant to the

key assumption of the ACA.

Section 6.5 examines the evidence from the residential and nursing home survey. The most significant finding is that variations between London and elsewhere in the charges made to self-funding residents in independent establishments, are much greater than the ACA for London. Unit cost variations in the public sector are higher still. Public sector costs in London have been persistently higher than the ACA, and cannot be explained by differences of need. Unit cost variation between London and elsewhere is chiefly the result of labour cost differences, but differences in running costs and in staff productivity are also significant.

Section 6.6 discusses these results. First, the weight of evidence suggests that the equilibrium price for residential and nursing care in London could be significantly more than the allowance incorporated in the ACA. This would remain true even with the changes proposed by the 1996 review. Second, in future as demand rises for privately funded care, variations between areas in the equilibrium price may tend to increase. Third, there may be opportunity for local authorities in high cost areas to make use of services in cheaper areas, thus reducing their costs. Overall, the local price structure for residential care would appear to be so different from that of other services that there is a case for making the ACA specific to elements within SSAs.

6.2 The Rationale for the ACA

One of the guiding principles for Standard Spending Assessments is that the factors on which allowances are based should be outside the control or influence of the local authorities themselves. The original rationale for the labour cost adjustment, the key element of the ACA (Begg et al., 1983), was that it should reflect evidence about local variations in the price of labour outside the state sector. This is echoed by London Economics in the recent review by Elliott et al. (1996, annex D) :

The central assumption ... is well founded: the amount you need to pay in each authority to attract staff of the right calibre and qualifications can be inferred from the wages that private sector employers in the area find it necessary to pay.

The logic of this rationale was that the working of market forces in the independent sector would ensure that these reasonably closely represent the current 'equilibrium' state of the underlying markets for inputs: the price that would exactly produce the supply of care services required to meet the demand under a standard level of services. By contrast, management in the public sector may have less incentive to respond efficiently to the state of the labour market, and possibly be weak in

wage bargaining.

Geographical variations in labour prices have been calculated using evidence about average earnings within regions from the annual New Earnings Survey. The method has been to standardise actual average earnings within each region on the basis of about eight occupational groups that are broadly representative of the labour force used in local government. In fact public sector employees are now included in the NES earnings calculations and indeed teachers, a group mainly employed by local authorities, are one of the occupational groups included in the calculation. Regional averages are used mainly because the NES is not sufficiently large to provide highly accurate measures at the local authority level. The regions used are City of London, Inner London, Outer London, South East Inner Fringe, South East Outer Fringe, Other South East, Rest of England. Some smoothing is done between the three SE regions to ensure progressively higher adjustments moving towards central London. The rest of England is grouped together because regional analyses have not found consistent and significant earnings differences.

The focus was on labour inputs because social services, like most local authority services, is predominantly labour intensive. While in principle there is a separate ACA for each module within the Standard Spending Assessments, they all depend directly on the labour cost adjustment. The ACA for residential care, like most others, does not allow for the full variation of the labour component, since it is assumed that not all input costs are related to labour. A small additional adjustment has been made since 1994/5 to allow for high property values in the South East, based on average rateable values.

6.3 The ACA Review

The 1996 ACA review supported the view that the aim was to estimate the equilibrium wage rates for staff as the basis for area cost adjustments (Elliott et al., 1996). Its principal recommendation for change was to adjust the differentials in average earnings to allow for area variations in the quality of people in the labour market. London Economics, in Elliott et al. (1996, p.140), argue that:

workers in the City may be highly paid because there is a concentration of very highly qualified workers in the City. ... The fact that you need high pay to attract highly qualified people to the City does not imply that you need high pay to persuade less qualified people to work as teachers in the area.

It is this argument that led the ACA review (p.68) to propose standardising differences in pay by education, age, length in post, etc. of employees prior to calculating the labour cost adjustment. The

other recommendations of the review that affect the method, first to use the Labour Force Survey in place of the New Earnings Survey, second to base the analysis on all employees not just those in the private sector, are essentially pragmatic. Only the LFS has the information to enable the quality adjustment - the standardisation by education etc. - to be made, but it does not distinguish employment in the public and private sectors. The report (p.78) argues that this is now less important because contracting-out has blurred the distinction between employment in the public and private sectors.

The original methodology had been subjected to a number of criticisms, which the review examined. These criticisms fall into three major types: are the differences in earnings a realistic measure of equilibrium wage differentials between areas; what about non-wage labour costs and factors which may affect productivity; and what allowance should be made for higher costs for non-labour items? These are briefly reviewed in the following paragraphs.

6.3.1 Equilibrium wage differentials

Whether equilibrium wage differentials in the public sector are really approximated by actual wage differences across the private sector, even with the adjustment for staff quality, remains largely an article of faith. Chapters 4 and 5 of the review discuss the arguments supporting this position, revisiting theories about the behaviour of employees in both 'closed' labour markets for qualified staff, where the occupational choice lies between similar work in different areas; and 'open' labour markets mainly for unqualified staff, for whom the occupational choice lies mainly among similar occupations locally.

Despite the theoretical argument, in the case of the main employee groups in 'closed' labour markets, teachers, police and firefighters, the review concedes that the actual differential in earnings does not seem to be straining towards the earnings differential in the private sector as measured by the ACA (*op cit* §5.4). The main evidence for this is the similarity of turnover between regions). This is probably true even after allowing for area variations in staff quality in the private sector (*op cit* §6.3.4).

The review does not discuss in such detail earnings differentials in the personal social services, nor indeed generally in 'open' labour markets. The usual assumption about residential and nursing home care is that the supply of inputs is elastic: for example the number of people potentially available to work in care homes in an area is from an 'open' labour market much larger than the demand from this sector alone. In this case demand in this sector alone is unlikely to affect price, and price variations would reflect the level of demand in the wider market. However, the supply of some workers, particularly those with relevant qualifications, is not unlimited. In this latter case, the level of demand in an area relative to the available workforce may well affect price.

6.3.2 Non-wage labour costs

Are earnings differences sufficient as a measure of the increased labour cost in some areas? A frequent argument is that there are significant non-wage factors which affect costs in the public sector. These are of three types:

- Benefits that may be given in lieu of wages, such as a shorter working week.
- Factors associated with recruitment and turnover. Turnover costs are not expensive in themselves, but staff gaps means using agency staff, acting-up, and overtime, all of which increase costs.
- Differences of productivity determined by local conditions.

The first two of these reflect things that might happen when actual wage differentials are not set in line with the market clearing rate. It would not be necessary to compensate for these if wages were appropriately set - for example, the turnover rate caused by people seeking better conditions of employment would be the same everywhere. However, differences may occur not only as a result of wage imbalances. Turnover may be high where the opportunity cost of moving is low, e.g. in areas where there are plenty of alternative sources of work, without uprooting one's family. Bebbington (1995) found in 1990 that turnover rates among social workers are highest not where the ratio between their average pay and the average level of earnings is the greatest, but in those areas where the labour market is most buoyant. Another issue, raised by Stanton (1991), is that part time working is more common in some areas than others, for reasons that are not immediately linked to average earnings levels. Part time staff are not only cheaper but can be much more flexibly deployed in response to problems such as turnover. The ACA review proposes adjusting for part time working, but this is because part time workers generally have lower earnings per hour, not for the cost-saving effects of their flexibility.

Labour productivity in residential and nursing care is by no means constant. Productivity here effectively means the ratio of clients to staff (allowing for any differences in the needs of those clients). Population sparsity and its effect on travel time is the easiest to argue as being outside the control of local authorities. However, following the logic of the ACA rationale, it is perhaps surprising that no attention has been paid to productivity comparisons with comparable service industries in the private sector.

6.3.3 Non-labour costs

Hitherto, no allowance has been made for cost differences that are not labour cost variations. For the social services formulae, other than for domiciliary care, it has been assumed that running costs, which comprise about one-quarter of recurrent expenditure in local authority homes, do not need a local price adjustment. In practice it is likely that a substantial proportion of running costs are not on

equipment and consumables, which vary in price only a little, but on services. Where these are recruited locally, as in the case of agency staff or maintenance staff, it is likely the price will reflect local average earnings.

Of the true non-labour costs, it is that which relates to buildings which most obviously varies locally. An adjustment for rates is now made and the ACA review proposed a similar adjustment for rents, though it appears the effect would be small (*op cit* §5.9.3). The Revenue Support Grant has a separate element for capital funding, which is outside our present remit. However, capital costs are most important for residential care, for which premises (or capital conversions) are relatively shortlived. The introduction of a mixed economy results in the translation of capital costs into revenue cost, through the charging policy of independent homes, and so will get passed onto the revenue account. There may be a case for a further adjustment, though essentially this is an argument for the incorporation of capital with service costs in SSAs.

6.4 Costs Comparisons Between Public and Private Provided Care

As a result of privatisation following the community care reforms, residential care is the first example of a service represented as a major component within the SSA methodology that has developed a private sector which starts to approach the scale of the public sector. In March 1996, five out of six long-stay residents were in care homes in the independent sector. Many of these residents continue to be funded by the state, but the survey found that one-quarter of all recent admissions are of people who are wholly self-funding, and one in five of the independent homes had a majority of self-funding residents. Because the market for state funded care in an area is largely monopsonistic, being bought only by the local authority, it is what is happening to self-funders that may represent more realistically the consequences of a free market. In fact the charges made to self-funders are not so very different to those for people who are publicly funded, nor are self-funders greatly different in terms of their care needs (see Chapter 4). Most homes are mixed in their intake: just 2 per cent of all independent sector homes were exclusive to self-funders. It is arguable that the private and public sectors for residential and nursing care are not highly differentiated in their product.

So it is becoming possible to make comparisons between private and public sectors which are sufficiently equivalent to provide a test of the central tenet of the ACA methodology. Moreover, such comparisons can include not only labour costs, but also productivity and other factors affecting costs.

The logic of the argument is as follows. In the mixed economy following the community care

reforms, it would be expected that the balance of demand and supply will be what determines price, rather than the costs of inputs, as it was before when the role of local authorities was to manage existing capital facilities and labour pools. However, if the market is operating 'perfectly', then independent suppliers will compete against one another on price, until ultimately the price of care is at the level at which they can provide the required standard of service with acceptable return on investment. This price would therefore relate closely to what suppliers would have to pay to obtain labour and capital to operate their service in that area.

In practice the private market is unlikely to behave quite so ideally. The market as a whole is still dominated by the local authorities, as the purchasers of three-quarters of all care. Many of the newly independent homes have devolved from local authority ownership but still retain a close working relationship with their original owners. Second, there are signs of short run barriers to supply. Barriers to market entry for new providers will produce supply problems and price variations unrelated to the cost of inputs. It is therefore doubtful that as yet prices in the private sector will accurately reflect the open-market 'equilibrium'. Nevertheless, what is now happening in the private sector should by now provide a pointer.

6.5 Evidence from the Survey

Table 6.1 shows, for each local authority:

- The average gross unit cost of residential care in local authority homes calculated using financial data collected for the purpose of compiling RO3B returns for 1996/97 (the denominator is the number of residents in the home at the time of the survey in November 1996).
- Average charges in private and voluntary homes calculated from information supplied by heads of homes of the current charges to self-funding residents included for homes in the survey in November 1996.

This table makes clear that there is considerable variation between areas both in the unit costs of local authority homes and in the charges made by independent homes. The key variation is between areas inside and outside London. It is on this comparison that the remainder of the chapter is based.

Table 6.2 shows the numbers of homes, residents, self-funding residents, and staff, by type of home, for both London and outside, among homes in the survey that provided adequate cost information. For simplicity, private and voluntary residential homes have been combined, as have nursing homes and dual registered homes. However independent sector residential and nursing homes are separated because of their very different unit costs, though, as will become apparent, they lead to

similar conclusions about the 'London effect'.

6.5.1 Unit cost comparisons

Table 6.3 presents the key results for this chapter. Table 6.3A (first column) shows that, as is well known, local authorities in London pay more per resident for whom they provide: just over one-third more (gross unit cost). It is a considerably greater differential than the ACA used for residential care (column 3), and would remain so even with the changes recommended by the 1996 review (column 4). This table is based on national statistics for the 21 authorities in the survey, but the results would be similar if all English local authorities were included.

Table 6.3B, and the remaining tables, are based on evidence from the survey. This table shows the variation between London and elsewhere in: (i) the average unit costs of care in local authority homes; (ii) the average charges in the independent sector residential and nursing homes for self-funding residents; (iii) the average charges in the independent sector residential homes with a majority of self-funding residents. Comparing the first column of this table with the second column of table 6.3A, which was derived from national feedback statistics, confirms that the survey is reporting costs in line with the national picture.

From the remaining columns of table 6.3B it is evident that the actual difference in costs in local authority homes between London and elsewhere is much greater than the corresponding difference in charges in independent sector residential and nursing homes for self-funding residents. However, and this is the key result, the differential in the private sector itself, between London and elsewhere, is plainly much greater than the differences in the Area Cost Adjustment shown in table 6.3A.

So if the private sector does come anywhere near indicating the true equilibrium price difference between London and elsewhere, then it is considerably higher than that assumed by the ACA.

The difference in local authority units costs has in fact been considerably in excess of the ACA differential almost continuously since the present grant system was introduced in 1980. Table 6.3C shows the situation that was reported by an earlier PSSRU survey concerned with local authority grant. Darton and Knapp (1986, table 2) showed in 1981 what is confirmed again in Chapter 4 of the present report for 1996: that it is impossible to explain these differences by the care needs of residents or the characteristics of homes.

6.5.2 Labour costs, running costs, productivity and occupancy

Let us break down these unit costs into their components to understand further what is causing these higher unit costs. We do so using the following decomposition of the cost equation:

Gross costs = Employee Costs + Running Costs

and so:

$$\begin{aligned} \text{Unit Costs} &= \frac{\text{Employee Costs}}{\text{No.Staff}} \times \frac{\text{No.Staff}}{\text{Residents}} + \frac{\text{Running Costs}}{\text{Places}} \times \frac{\text{Places}}{\text{Residents}} \\ &= \frac{\text{Unit Labour Cost}}{\text{Staff Productivity}} + \frac{\text{Running Cost per Place}}{\text{OccupancyRate}} \end{aligned}$$

Tables 6.4 and 6.5 examine each of the four elements in this equation. The unit labour cost and the running cost per place are only available for local authority homes (we also excluded those with joint income which could not be split between employee and running costs). Table 6.4 shows that in London, both the cost per whole time equivalent employee and the running cost per place are about one-third higher than outside. While not as great as the total unit cost difference, labour cost differences are more than predicted by the labour cost adjustment.

Table 6.5 examines the other two elements in the unit cost equation: staff productivity in terms of residents per whole time equivalent member of staff, and occupancy rates. Local authority homes in London have slightly lower staff productivity than those outside, though there is little difference for independent sector homes. Occupancy rates do not differ between London and elsewhere.

6.6 Discussion

6.6.1 *The equilibrium price rate*

It appears that local variations in the true equilibrium price rate for residential and nursing care, may not be well approximated by the ACA. In particular, the price is higher in London, though not as much higher as the actual unit costs of local authority homes.

The main evidence for this is the difference in costs that is emerging in the private sector, in particular for self-funding residents. This is considerably higher than the ACA variation. It is true that the influence of local authorities may still affect the prices to self-funded residents, and it would be foolish to treat the present reported differential as an accurate measure of the equilibrium price difference. But the differentials are still higher among those residential homes that most free from local authority influence, those where the majority of residents are self-funding.

It also seems significant that the difference in actual unit costs paid by local authorities has nearly always been higher than the difference in the ACA, ever since 1980. When the method was originally introduced, the high unit cost was attributed to the previous methodology for distributing

grant which was believed to have favoured London and allowed it to provide a more costly service. Any such effect should have long since disappeared. In the 1980s the higher costs in London were regarded as the consequence of, on the one hand, the ease of raising money through increased rates, the burden of which did not by and large fall on voters; and on the other, reputed management weakness or reluctance to control wage demands. The ability of high-spending authorities to raise rates was brought under control by a variety of means, while the management of social services has become much more cost aware and revolutionised by the 1990 NHS and Community Care Act. Yet the differences in actual unit costs persist, and indeed have grown largely in parallel with variations in the ACA. The implication would seem to be that there is an underlying cause of these differences which is less ephemeral than the explanations frequently offered, and which, if it does not match price variations in the general labour market, yet is not unrelated.

6.6.2 The effect of private demand

Only a minority of residents in care homes at present are wholly privately funded, but if this should grow in future the possibility exists that private and publicly funded demand may compete. The cost analysis in Chapter 4 found that the higher the proportion of privately-funded residents in a home, the higher the average fee. The difference is not large, but might have an effect on the cost of placing local authority supported residents in certain areas where there is a high proportion of privately-funded residents. The implication might seem to be that such local authorities might have to pay a premium for homes to care for publicly-funded residents, as it is in homes' interests to care for lower cost residents at higher prices. This might be expected if demand were high in relation to supply. But on balance we do not find evidence for this at present at local authority level, and it may be that homes in effect use privately-funded residents to subsidise publicly-funded residents, which is likely in situations of excess supply.

6.6.3 Local prices and ACA

Residential and nursing home care is different from all other local services covered by SSAs, in that there is no essential requirement to provide it locally. London boroughs place 30 per cent of their supported residents outside their own area (Department of Health, 1997c, table L22). Other authorities place only 5 per cent outside their own areas. This response by London may well be due to either the higher cost or the shortage of supply in London. This would explain why in table 6.3A the difference in the unit cost for local authority supported residents is so much lower than the difference in local authority homes. Thus local prices are not the sole determinant of the price faced by a local authority for residential care.

Why cannot authorities simply purchase the most economical service available nationally, making local price differences irrelevant? Of course, it is probable that many residents prefer to be located close to their original home, but little is known either about residents' preferences in this respect or

the circumstances under which London boroughs use homes outside their areas. There may of course be additional case-management costs in distant placements. The DSS survey of privately funded admissions to independent homes (Netten et al., 1998) will provide insight into the preferences of people who fund themselves, and who face directly the additional cost of wishing to remain in London. The issue is an emotive one, because of scandals in the 1970s when it was claimed some authorities were 'bussing-out' elderly people to very inferior private homes in seaside resorts. Nevertheless, properly managed this would not seem inconsistent with widening customer choice. There may well be a case that the area cost adjustment for residential care should not depend solely on local prices.

Table 6.1: Average weekly unit cost of local authority homes, and average price paid by self-funders in residential homes and in nursing homes, by local authority in which the home is situated

	<i>Local authority owned homes</i>		<i>Self-funders in residential care</i>		<i>Self-funders in nursing homes</i>	
	<i>Average unit cost £</i>	<i>No. of residents</i>	<i>Average price £</i>	<i>No. of residents</i>	<i>Average price £</i>	<i>No. of residents</i>
Barnet	409	243	310	66	482	47
Haringey	-	0	314	18	508	5
Harrow	376	82	334	15	468	14
Lewisham	379	199	282	26	420	10
Newham	416	87	282	2	-	0
Southwark	410	173	-	0	404	14
Sutton	-	0	271	32	405	45
Doncaster	335	258	228	12	276	10
Leeds	235	536	260	63	332	41
Manchester	-	0	231	39	323	22
Sandwell	285	225	231	1	348	4
Sefton	292	212	203	83	305	45
South Tyneside	271	205	247	15	281	3
Stockport	317	92	222	39	366	9
Tameside	-	0	232	10	273	8
Cheshire	341	330	249	68	326	73
Devon	287	490	226	265	309	171
Kent	277	714	241	251	376	148
Norfolk	262	634	245	100	335	70
Nottinghamshire	243	858	227	85	327	113
Warwickshire	231	208	235	103	343	41

Source: PSSRU Cross-Sectional Survey of Residential and Nursing Care, 1996. Average unit cost in local authority homes is based on the total (gross) expenditure reported for the home, as part of the 1996/7 RO3B enquiry, and is weighted by numbers of residents.

Table 6.2: Numbers of homes, residents and staff in the PSSRU Cross-Sectional Survey of Residential Care, 1996

Homes not reporting unit costs or charges are excluded throughout.

A. Homes

	<i>Local authority homes</i>	<i>Independent residential care homes</i>	<i>Nursing & dual registered homes</i>
London boroughs	19	29 (7)	25 (1)
Other areas	143	193 (44)	161 (15)

Note: 1. Numbers in brackets denote homes with a majority of self-funding residents.

B. Residents

	<i>Local authority homes</i>	<i>Independent residential care homes</i>	<i>Nursing & dual registered homes</i>
London boroughs	784	830 (159)	1037 (135)
Other areas	4762	4930 (1134)	6254 (758)

Note: 1. Numbers in brackets denote residents who are self-funding.

C. Staff (whole time equivalent)

	<i>Local authority homes</i>	<i>Independent residential care homes</i>	<i>Nursing & dual registered homes</i>
London boroughs	601	570	1028
Other areas	3501	3637	6179

Note: 1. Whole time equivalent staff are calculated as the number of full time staff (working 30+ hours per week) plus one half the number of part time staff.

Table 6.3: Average weekly unit cost of local authority homes, charges to self-funders, and the Area Cost Adjustment

A. From administrative statistics (1995/6) for the 21 survey authorities

	<i>Average unit cost of all local authority funded residential and nursing care</i> £	<i>Average unit cost in local authority homes</i> £	<i>Average PSS Area Cost Adjustment</i>	<i>Average ACA for PSS recommended by the 1996 Review</i>
London boroughs	363	413	1.1471	1.2683
Other areas	268	277	1.0102	1.0895
London as a % of other areas	135	149	114	117

Source: Columns 1 and 2 are from RO3B, 1995/6, RA/95 and RA/96 (for full details of calculation, see Bebbington, 1997). Column 3 is for 1995/6. Column 4 is from Elliott et al., 1996, table 6.1. Both columns 3 and 4 are population weighted.

B. From the PSSRU Survey (1996)

	<i>Average unit cost in local authority homes</i> £	<i>Average charge for self-funders in residential homes</i> £	<i>Average charge in residential homes with a majority of self-funders</i> £	<i>Average charge for self-funders in nursing homes</i> £
London boroughs	399	300	314	443
Other areas	272	234	232	332
London as a % of other areas	147	128	135	133

Source: PSSRU Cross-Sectional Survey of Residential and Nursing Care, 1996. Columns 1, 2 and 4 are summarised from table 6.1. These are the averages per resident (hence the small difference with table 5.14).

C. From the PSSRU Survey of Old People's Homes, 1981

	<i>Average unit cost in local authority homes</i> £	<i>Average PSS Area Cost Adjustment</i>
London boroughs	92	1.0655
Other areas	75	1.0028
London as a % of other areas	123	106

Source: Column 1 from Bebbington & Darton (1983, table 3.3.4), and is based on 235 homes. Column 2 is for 1980/1 (70% of the labour cost index).

Table 6.4: Labour costs and running costs in local authority residential homes, by type of authority

A. Actual weekly rates

	<i>Average labour cost per wte staff in local authority homes £</i>	<i>Average running costs per place in local authority homes £</i>
London boroughs	405	68
Other areas	307	49
London as a % of other areas	132	137

Source: PSSRU Cross-Sectional Survey of Residential and Nursing Care, 1996. Labour costs are the average per wte member of staff, and running costs the average per place. Both columns exclude homes with joint expenditure. Column 1 additionally excludes homes with 4 or less staff, and column 2 excludes homes reporting nil running costs.

B. Average bottom-of-scale hourly wage rates for care staff

	<i>Local authority homes £</i>	<i>Independent residential care homes £</i>	<i>Independent nursing homes £</i>
London boroughs	5.43	4.48	3.99
Other areas	4.33	3.61	3.43
London as a % of other areas	125	124	116

Source: PSSRU Cross-Sectional Survey of Residential and Nursing Care, 1996. Averages are per wte member of staff.

Table 6.5: Staff and capital productivity, by sector of home and type of local authority

A. Residents per whole time equivalent staff member

	<i>Local authority homes</i>	<i>Independent residential care homes</i>	<i>Independent nursing homes</i>
London boroughs	1.30	1.38	0.98
Other areas	1.36	1.33	0.99
London as a % of other areas	95	103	100

Source: PSSRU Cross-Sectional Survey of Residential and Nursing Care, 1996.

B. Occupancy rates (residents per bed available)

	<i>Local authority homes</i>	<i>Independent residential care homes</i>	<i>Independent nursing homes</i>
London boroughs	0.91	0.95	0.86
Other areas	0.91	0.88	0.87
London as a % of other areas	100	108	99

Source: PSSRU Cross-Sectional Survey of Residential and Nursing Care, 1996.

Chapter 7

Policy Relevance of Results to Date and Areas for Further Research

7.1 Introduction

Residential and nursing home care is a costly form of care provision for a vulnerable group of people, and issues relating to it are rarely far from the top of the policy agenda in one form or another. The purpose of this chapter is to consider what the survey has to contribute to current areas of policy concern and to identify areas where further work is needed.

Areas of policy concern relevant to the survey include:

- The impact of the reforms on the use of publicly-funded residential and nursing home care.
- The distribution of central government funding for residential and nursing home care of elderly people.
- The cost implications of changes in levels of dependency.
- The use and costs of local authority provision.
- The use of homes by privately-financed residents.
- Equality of access to care.
- Bringing together the regulation of residential care and nursing homes into a single system.
- The impact of local authority purchasing policies, strategies and procedures on local markets.

7.2 Impact of the Reforms

The results reported here and in reports of the associated longitudinal survey suggest that the reforms introduced by the 1990 NHS and Community Care Act have had a profound effect on the process of admission, the types of residents cared for, and the composition of the residential and nursing home sectors. Compared with previous surveys, there was a marked increase in the level of dependency of residents in all types of home. The increase was most noticeable in nursing homes and in voluntary residential homes. In nursing homes this is probably partly due to the additional impact of the changes in the role of the NHS in the field of continuing care. In voluntary residential homes this is probably partly due to the inclusion of homes that were previously managed by local authorities (about a fifth of voluntary homes). Overall, publicly-funded residents were more dependent than privately-funded residents, a difference most marked among recent admissions and not found in previous surveys.

Nevertheless there is still a substantial proportion of residents (about a fifth) who appear to have relatively low levels of dependency. This may be due to inappropriate admissions, perhaps when privately-funded people are unaware of, or lack access to alternative services. It may also be due to people recovering after admission. If this is the case, it suggests that there is scope for more rehabilitative care to enable people to cope in private households.

7.3 Distribution of Central Government Funding

Chapter 5 of the report examines the cost element of SSAs for residential and nursing care. The weight of evidence from the private sector, as well as historically, suggests that the existing method does not at all accurately reflect variations in the cost of providing services. In particular, relative prices would seem to be higher in London than the existing method allows. At the same time, residential and nursing home care is exceptional among local services in that the need to provide it locally is not absolute, and so local variations in prices should not entirely determine the cost adjustment.

All of this argues for an approach to determining cost allowances which is specific to this element of the SSA and, for this, further work is required. The evidence presented in this report on prices in the private (self-funding) sector is not sufficient as a basis for determining price differences, for the private sector is no more than one-fifth the size of the statutory funded sector. Nevertheless, costs in the private sector should continue to be monitored. The new survey of admissions of self-funding residents (see section 7.10) will be of value, not only for the further evidence it provides about local price relativities, but also about the decisions of self-funded residents about whether to move to a local home or further away.

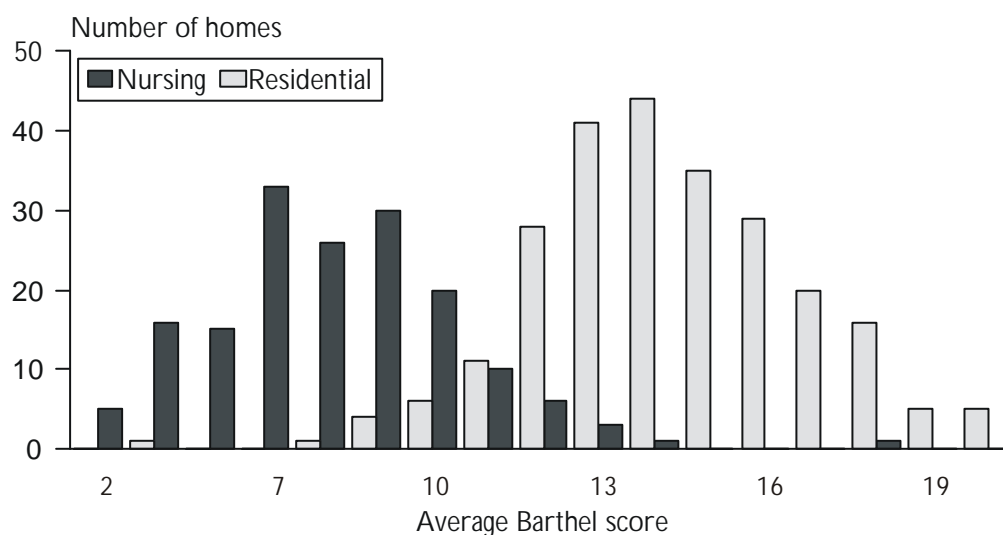
If the private sector for residential care is still too small to provide estimates of the equilibrium price differentials that are credible for SSA purposes (and do not create perverse incentives), it should still be possible to get nearer to a private sector that more closely resembles equilibrium differentials than does the present method. Moreover, Chapter 5 indicates the desirability of taking into account more than just wage variations. For example, local equilibrium price ratios for residential and nursing home care might not be dissimilar to the corresponding figures for the cost of hotel rooms. Consideration should also be given to the proportion of care that must be provided locally, at local prices, and the proportion that could be provided elsewhere, at lower prices.

7.4 Cost Implications of Changes in Levels of Dependency

The results of analyses to date suggest that the underlying relationship between the needs of individuals and the costs of caring for them are confounded by a number of factors. The most significant of these is the discontinuity at the residential-nursing home divide, but there are others: differential pricing which is dependent on the source of funding; the nature of local market conditions; and the purchasing policies of local authorities.

The differing regulatory requirements for residential and nursing home care and the pricing policies of homes and local authorities combine to make the major cost difference the result of the decision whether to place an individual in (or move between) residential or nursing home care. This needs to be taken into account in any estimation of the costs of rising levels of dependency in residential and nursing homes. Where there is an overlap in the average level of dependency between the residential and nursing sectors (that is, the range of Barthel scores within which both residential and nursing homes have been identified), the level of dependency has very little effect on price (and cost). About 13 per cent of residential care homes had approximately the same average Barthel score as some nursing homes and 20 per cent of nursing homes in the sample shared average Barthel scores with a residential care home. This pattern is illustrated in the following chart.

Figure 7.1: Distribution of average Barthel scores



Clearly, any predictions of cost differences resulting from further changes in levels of dependency will be dependent on whether, and if so when, single care homes are introduced. It is possible, however, to consider the cost implications of the rise in dependency over the last decade. Chapter 2 shows that during the past decade there has been a dramatic rise in levels of dependency, especially in nursing homes and voluntary residential homes. In nursing homes the proportion of

people who are heavily dependent has risen by 37 per cent and in voluntary residential care by 28 per cent. Prices in nursing homes have risen more slowly than those in residential care, even though it appears that there has been a greater rise in levels of dependency. When adjusted for earnings inflation using the Earnings Index or Personal Social Services Pay Index, prices rose by about 3 per cent in residential homes between 1988 and 1997 but have actually fallen in nursing homes (based on data in Laing and Buisson, 1997). The relatively flat relationship between dependency and cost within sectors shown in Chapter 4 implies a rather modest increase in the costs of care for this higher dependency population (assuming no substantial productivity changes over the period). Nonetheless, an immediate interpretation in the context of price changes in the same period is that the pricing policies of local authorities have resulted in prices being kept below the rise that would have been expected if increases in costs had been passed on to the consumer.

Further analyses are required to consider the implications of the proportions placed in each setting nationally. The admissions survey found wide variations in the proportion of publicly-funded residents placed in nursing home care which could not be accounted for by variations in characteristics of the individual or local supply factors (Netten and Darton, forthcoming). Assuming that outcomes for individuals are not adversely affected by placement in residential care when they are on the borderline with nursing home care, this suggests that there are potential efficiency savings to be made by improving placement decisions. This assumption that outcomes are not adversely affected is an important one, and analyses of the longitudinal survey should give us some insight into this issue.

The analysis to date has allowed an estimation of the rate at which costs change as the average level of dependency changes, taking into account how people are currently placed. Further work is needed, however, to:

- translate this into a range of likely cost values;
- make a direct connection between the cost-dependency relationship and the way in which dependency was measured in earlier surveys; and
- include community nursing costs to ensure all public expenditure costs are included.

A major reason for the differential costs is the requirement that nursing home staffing levels and qualifications are adequate to provide nursing care. To date, the analyses have excluded community nursing costs, although the average costs of nursing inputs (about £5 per resident in residential care) appear marginal given the difference in price between residential and nursing home care.

7.5 Local Authority Provision

The analysis of local authority managed homes suggests that price inflation and changes in dependency explain most of the dramatic rise in unit costs over the period 1981 to 1996. The remaining 'unexplained' rise of 12 per cent may be due, in part, to the increased use of homes to provide a high proportion of short-term places and unmeasured effects of dependency-related cost effects.

Nevertheless, local authority homes are more costly than independent provision, and there has been some debate over whether this is justified. It has been hypothesised that these homes provide care that it is difficult to find among independent providers: short-term care and care of people with severe dementia or behavioural problems. It is certainly true that the majority of short-term care is provided by local authority managed homes, and that dementia and behavioural problems are more prevalent than in other sectors of residential care. Local authority home costs have been found to be related to high proportions of short-term care and to the proportion of residents with severe dementia. However, the costs that were analysed were only revenue costs. Once capital costs are included, the cost of local authority care was found to exceed that of nursing home care (see Netten and Dennett, 1997). Chapter 3 shows that residents in nursing homes were considerably more dependent than those in local authority care. Moreover, residents with the most severe levels of dementia are primarily found in nursing homes rather than in local authority residential homes.

Indicators of quality of care suggest that although the social climates of home are clearly different in the different sectors, there is little reason to believe that higher quality of care is a reason for consistently higher costs in the local authority sector. Although care staff to resident ratios are higher in local authority homes than private residential homes, the difference is removed once proprietors are included, while the staffing levels in nursing homes are higher than those in local authority homes. Social climate factors that are related to costs in the local authority sector are:

- Independence (associated with higher costs), which is higher in the independent sector; and
- Organization (associated with lower costs), which is also higher in the independent sector.

It is worth noting, however, that the measure of Organization refers to clarity of procedures and residents knowing where they stand. This may be associated either with more efficient organisation or with more rigid regimes which may be less costly to administer.

Further analysis is needed but, on the face of it, all of the difference in cost is unlikely to be justified by case-mix or quality of care. However, although the cost differences may not be justified in these terms, Chapter 4 showed that wages are clearly much lower in the independent sector. Some of the

cost differences may reduce, therefore, as a result of the introduction of the minimum wage.

7.6 Regulation of Residential and Nursing Homes

Notwithstanding the discussion above about the overlap in dependency between residential and nursing homes, there is, for the most part, a clear distinction between residential and nursing home care. Average levels of dependency in nursing homes are higher than in residential care (see Chapters 2 and 4). Reasons for placement in nursing care are associated with needs for nursing care and medical conditions such as malignancy (Netten and Darton, forthcoming). The effects of regulatory requirements are shown in the higher levels of staffing and higher levels of qualification required (see Chapter 3). It is these factors that primarily drive the costs of care and it is unlikely that the introduction of a single regulatory system would quickly result in them being able to change. Residential homes, on the other hand, may relatively quickly acquire additional staff, and demand would rise as they would be able to provide care for more dependent people at lower prices. This is likely to result in at least a short-term inflationary period in care costs.

The analysis of prices at the point of placement suggested that prices set in advance at the level of the home were lower than if agreed at the local authority level or for individual clients. The survey found that higher prices were associated with individual client-related price setting in residential care, but that lower prices were associated with client-related price setting in nursing homes. Authorities may wish to take these findings into consideration when negotiating pricing arrangements under a single regulatory arrangement. The analyses of costs will allow us at least to hypothesise, on the basis of the previous arrangements, as to what realistic costs might be for different levels of dependency.

One issue that is often raised is the adequacy of nursing care provided in residential and nursing homes. The results of the survey suggest that there may be a lower take-up of community nursing services in private residential care than in local authority and voluntary homes, although there are similar levels of need for nursing as in these other forms of residential care (see Chapter 2). Clearly this would be an important issue to address in the regulation and standard setting arrangements for single care homes.

7.7 Privately-Funded Residents

The survey yielded valuable information about the nature of privately-funded residents. Chapter 2 found that the evidence seemed to suggest that there are people who are in residential care who

could be cared for in the community. They have relatively low dependency both in terms of cognitive and physical impairment. Often such people have been admitted from single person households and are older than those with higher levels of dependency. In the absence of expert advice it may appear that it is necessary for a person to move into residential accommodation because they are old, living alone and have some impairment. Of course, a proportion of privately-funded residents may prefer to enter residential care at lower levels of dependency. Residential-based care provides company, and if people see it as inevitable they may wish to be admitted before a crisis.

The cost analyses found that privately-funded residents paid more for apparently the same care. It is likely, therefore, that they are cross-subsidising publicly-funded residents.

Any policy changes that divert those most able to be cared for at home from residential and nursing home care would have the effect of raising average levels of dependency in homes, which will have a knock-on effect for the costs of all residential and nursing home care. Any such effect will be compounded by the cross-subsidisation of publicly-funded residents and from the fact that (probably as a result of the reforms) a higher proportion of more recent admissions are privately-funded than those admitted more than a year ago. If local authorities continue to exert the downward pressure on prices that they have over the past few years the discrepancy between the prices paid by self-funders and local authorities may become even more marked. If authorities also exert their influence on behalf of privately-funded residents there will come a point (if it has not already) where quality must suffer and/or homes will go out of business.

7.8 Equality of Access to Care

Equity and social exclusion are major issues for social policy, and the surveys collectively have the potential to provide a good deal of empirical evidence about the role of residential and nursing homes in providing social care. Differences in access to health services have been demonstrated repeatedly, and the assumption must be that social care is similarly affected, though there is far less evidence. These concerns are usually focused on 'disadvantaged' social groups but can take other forms. At present there must be concern, for example, about the effect of the capital limits on the eligibility for state support.

Equity is of course at the heart of the SSA rationale, and the analysis on this topic has already indicated much about the type of person who seeks statutory assistance. The data could be exploited further to examine other local factors such as the effect of rurality on use. More generally, it would be possible to exploit further the link between these surveys and general population surveys

such as the General Household Survey, to analyse target efficiency and equity for residential and nursing home care between population groups defined by gender, income and capital, and housing tenure.

7.9 Local Authority Purchasing Policies, Strategies and Procedures

The analyses in Chapter 4 highlight the importance of local authority purchasing policies, strategies and procedures in affecting prices. In particular, the way a home is reimbursed corresponds to a sizeable difference in the price charged. Adopting a flexible price arrangement where prices can vary on a per-case basis rather than imposing a single pre-determined price corresponds to higher residential care home prices and lower nursing home prices. This result was obtained whilst accounting for the factors which affect costs, such as labour prices and client dependency. The choice of reimbursement arrangements appears to affect the margins at which homes operate and the business risks providers face (and thus provider stability). Other Department of Health-funded work (the Mixed Economy of Care research programme) suggests that the targeting of appropriate services is affected by the reimbursement mechanism, and more broadly the commissioning arrangements, in operation. The importance of policy attention on purchaser commissioning derives not only from the substantial impact of these arrangements but also from the fact that these arrangements are so readily adapted by the authority.

The analyses also imply the need for relatively low-key role for competition policy for authorities managing in the current market. Competition as measured in the analysis does have a significant association with providers' prices, but the effects are small, suggesting that the market is competitive, but not excessively so.

7.10 Conclusion

The survey, especially when seen in the context of the associated longitudinal survey of publicly-funded residents, provides a rich source of data about the current population and nature of residential and nursing home care. The results reported here reflect the initial findings and have focused on the primary objectives in commissioning the research: the cost-dependency relationship, and a baseline description of the residents cared for and the characteristics of homes. Continuing work will refine these findings. There remain areas of further investigation which would be valuable. Some require more data. The most obvious gap in at present is an understanding of the circumstances of admission of privately-funded residents. This will be addressed by a new survey commissioned by the Department of Social Security. Other areas of interest require further analysis

of existing data. One potential development would be linking the longitudinal datasets to allow investigation into the effects of home characteristics on length of stay, mortality and changes in dependency. The survey should provide a valuable source of material when considering policy options in the field of residential and nursing home care of elderly people for some time to come.

Appendix 1

Descriptions of Previous Surveys of Residential and Nursing Home Care

A1.1 PSSRU Survey of Residential Accommodation for the Elderly, 1981

This survey was conducted in the autumn of 1981, in collaboration with 12 local authorities in England and Wales. The survey was commissioned by the former Department of Health and Social Security, and covered residential homes for elderly people run by local authorities and registered residential homes run by private and voluntary organisations. A small number of voluntary homes exempt from registration were also included. The 12 local authorities were selected from among 35 which expressed a willingness to participate. The final selection of local authorities was based on the classification of local authorities in the DHSS summary of Local Authority Planning Statement (LAPS) returns (DHSS, 1979), with representatives of the main groups of local authorities, i.e. London boroughs, metropolitan districts and non-metropolitan counties, to be included. Welsh authorities were added to the classification as explained in Darton (1986a). The 12 authorities selected included four London boroughs, four metropolitan districts, three English counties and one Welsh county.

Homes in the areas selected for the survey were sent a self-completion questionnaire, containing questions about the facilities provided by homes, the staff, the residents, and the charges to residents, and a liaison officer in each local authority social services department coordinated the collection of the questionnaires from homes. The questionnaires used in the survey were developed from those used in the 1970 Census of Residential Accommodation (DHSS, 1975), which covered local authority and voluntary residential homes for elderly people and younger people with a physical handicap, and the (unpublished) 1971 DHSS sample survey of private residential homes. Completed questionnaires were obtained from 235 local authority homes, 68 voluntary homes (a response rate of 69 per cent) and 153 private homes (a response rate of 71 per cent), accommodating a total of 14,007 residents. In 1982 and early 1983, a follow-up survey of proprietors was conducted in one-third of the respondent private homes (Judge, 1984). The methodology of both surveys is described in Darton (1986a), and the characteristics of the residents of the homes are described in Darton (1986b).

A1.2 PSSRU/CHE Survey of Residential and Nursing Homes, 1986

This survey was conducted during the autumn of 1986 and the spring of 1987 in a sample of 855 private and voluntary registered residential care and nursing homes in 17 local authority areas in England, Scotland and Wales. The survey was commissioned by the former Department of Health

and Social Security, and covered homes catering for elderly people, people with learning disabilities, people with mental illness and people with physical disabilities, although over 90 per cent of nursing homes included elderly people in their clientele. The uneven distribution of homes for people in the younger client groups prevented the use of a random sampling procedure for selecting authorities, and a purposive selection procedure, including stratification by type of area, was used to select the areas. The classification of local authorities used for the 1981 survey was also used to select areas in England and Wales for the 1986 survey, while Scottish authorities were selected independently. For the selection of nursing homes, which are registered and inspected by health authorities, health authorities falling largely within the selected local authorities were included in the sample. The 17 authorities selected included four London boroughs, four metropolitan districts, six English counties, one Welsh county and two Scottish authorities. Six of the 17 authorities had also been included in the 1981 PSSRU survey. Within the selected authorities all residential care and nursing homes for the younger client groups were selected, and subsamples of residential and nursing homes for elderly people were selected, except that, for two of the 17 authorities, only residential care homes for the younger client groups were selected.

A two-stage approach to the sampled homes was used, in which a questionnaire was posted to the home, to be completed by the proprietor or manager, followed by a personal interview, based on the methodology of the 1981 survey and the interview follow-up conducted in private homes. A total of 606 establishments responded, although this figure includes separate questionnaires which were received from the two separate units of one home. The overall response rate, excluding 85 homes found to be out of the scope of the survey, was 79 per cent. Among the 606 homes which responded, 58 provided incomplete information, 16 of which only completed the interview questionnaire. The 590 homes for which the postal questionnaire was completed included 276 residential homes for elderly people, 242 residential homes for the younger client groups and 72 nursing homes. Information was collected for a total of 10,653 residents, 4,974 of whom were living in residential homes for elderly people and 1,662 of whom were living in nursing homes. For the purpose of selecting the sample, dual registered homes were classified as residential or nursing homes depending on which sampling list they appeared, and homes which appeared on the sampling lists for both residential and nursing homes were included with residential homes. However, only a small number of homes appear to have had dual registration. Although 62 of the 590 homes reported that they were registered by both a health authority and a social services department, only 15 were listed as dual registered in the directory published by Laing and Buisson (1987). Two other homes were listed as being dual registered in the Laing and Buisson directory and, of the total of 17 homes, 11 were included with residential homes and six with nursing homes. The methodology of the PSSRU/CHE survey is described in Darton et al. (1989).

A1.3 Social Services Inspectorate Survey of Public Sector Residential Care for Elderly People, 1988

This study was undertaken by the Social Services Inspectorate of the Department of Health as part of a national inspection of management arrangements for public sector residential care for elderly people during 1988. The inspections were carried out in 14 local authorities in England, including five metropolitan districts and nine counties. A separate study was also carried out in four London boroughs. Within each of the 14 local authorities, visits were made to three residential homes for elderly people, and the same information about each resident was recorded by the manager as in the 1981 and 1986 surveys. In this study, information was collected about 1,683 residents in the 42 homes. The study is described in the report by the Department of Health Social Services Inspectorate (1989).

Appendix 2

The Sample and the Response to the Survey

A2.1 Selection of Local Authorities

The sample for the cross-sectional survey was based on the sample of local authorities drawn for the survey of admissions, and so the procedure for selecting the authorities for the admissions survey is outlined here.

For the admissions survey, an initial sample of 20 local authorities, stratified by type of authority (London borough, metropolitan district, and county), was selected and approached to discuss participation in the survey. It had been estimated on the basis of available statistics that this number of local authorities would yield 2,200 new long-term admissions to residential and nursing homes over a period of three months. Within authority type, local authorities were subdivided by a further geographical stratification and then classified according to the following additional factors: socio-economic group (Craig, 1985), population sparsity (Chartered Institute of Public Finance and Accountancy, 1994) and migration rate (1991 Population Census data). The migration rate measured the influx of people aged over 45 years and was included as an indicator of retirement areas. London boroughs were divided into inner and outer London boroughs, and were then selected to represent different socio-economic groups and, secondly, different migration rates. Metropolitan districts were selected to represent different socio-economic groups and, secondly, different levels of population sparsity, within the constraint that one metropolitan district be selected from each of the six former metropolitan counties. Counties were divided into two geographical groups corresponding to the North and Central and to the Southern Policy and Business Regions used by the Social Services Inspectorate. They were then selected according to migration rate and population sparsity and, within these, total population, in order to ensure the inclusion of a sufficient number of large local authorities. Where there were alternatives within these subgroups, authorities were selected at random. The information on socio-economic groupings was only available for the 1981 Population Census figures at the time of the selection of the sample, and was not used in the selection of county councils because it was only available at district level. The local authorities included in a concurrent PSSRU project, 'Evaluating Community Care for Elderly People', were excluded from the sampling frame. The 20 selected authorities included six London boroughs, six metropolitan districts and eight counties.

Some of the original 20 selected local authorities were not able to participate in the admissions survey, and authorities with similar characteristics from the same type of authority, and inner or outer London, where relevant, were approached as potential replacements. Five additional authorities

were approached as potential replacements. Uncertainties about the definite agreement to participate and some delays by authorities in advising of their withdrawal resulted in a final group of 18 local authorities, including 14 of the original 20 selected and four of the five approached as replacements. This group included five London boroughs, eight metropolitan districts and five counties, as follows:

London boroughs

Inner London:	Southwark
Outer London:	Haringey, Harrow, Newham, Sutton

Metropolitan districts

Tyneside:	South Tyneside
West Yorkshire:	Leeds
South Yorkshire:	Doncaster
Greater Manchester:	Manchester, Stockport, Tameside
Merseyside:	Sefton
West Midlands:	Sandwell

Counties

Northern and Central Regions:	Cheshire, Norfolk, Warwickshire
Southern Region:	Hertfordshire, Kent

Comparisons of the final sample of authorities for the admissions survey with national socio-demographic indicators and statistics of residential provision suggested that the selected authorities were not atypical, either as a whole or within authority type. However, the final sample was rather unbalanced in terms of the number of authorities selected from each authority type. Comparisons of the number of supported residents, at 31st March 1995, indicated that the selected London boroughs covered 14 per cent of elderly residents supported by local authorities in residential and nursing homes, and the selected counties covered 13 per cent, whereas the figure for metropolitan districts was 24 per cent. In the analyses of the admissions survey the data were reweighted to represent the proportions of supported elderly residents in the three types of authority.

In the original planning for the cross-sectional survey, a sample size of 600 homes was proposed. It was proposed that all the local authorities in the admissions survey be approached to discuss participation in the cross-sectional survey, with the expectation that 15 might agree to participate, in which case an average of 40 homes would be selected from each authority. However, it was suggested that this number of authorities would be insufficient to represent the range of local market conditions and policies existing within local authorities. In addition, London boroughs tend to have

small numbers of homes, and thus a larger sample of London boroughs was highly desirable. It was decided, therefore, to approach a number of additional authorities in the categories under-represented in the admissions survey, as defined by the sampling frame used for the admissions survey.

Seven additional local authorities were approached for the cross-sectional survey, three of which had originally been approached for the admissions survey. The seven authorities approached included two inner London boroughs, one of high socio-economic status and the other being the only large inner London authority available for consideration; one outer London borough of high socio-economic status; two counties in the North and Central Policy and Business Regions; and two counties in the Southern Policy and Business Region. Both of the North and Central Region counties were areas of relatively low migration, 15 of the 19 North and Central Region counties being in this category, but the two Southern Region counties included one area of low migration and one area of high migration.

Four of the seven additional authorities approached agreed to participate in the cross-sectional survey, in addition to 17 of the 18 authorities included in the admissions survey. One authority indicated that it did not wish to participate since it had recently completed a similar internal survey. The additional authorities were: Lewisham, in inner London; Barnet, in outer London; Nottinghamshire, in the North and Central Regions; and Devon, in the Southern Region. Thus the complete list of 21 local authorities included in the cross-sectional survey was as follows:

London boroughs

Inner London:	Lewisham
	Southwark
Outer London:	Barnet
	Haringey
	Harrow
	Newham
	Sutton

Metropolitan districts

Tyneside:	South Tyneside
West Yorkshire:	Leeds
South Yorkshire:	Doncaster
Greater Manchester:	Manchester
	Stockport
	Tameside
Merseyside:	Sefton
West Midlands:	Sandwell

Counties

Northern and Central Regions:	Cheshire (Low migration)
	Norfolk (High migration)
	Nottinghamshire (Low migration)
	Warwickshire (Low migration)
Southern Region:	Devon (High migration)
	Kent (Low migration)

A2.2 Selection of Homes

A2.2.1 Sampling frames

The cross-sectional survey included residential homes for elderly people managed by local authority social services departments, and registered residential homes for elderly people, registered nursing homes for elderly people and dual registered homes for elderly people run by voluntary and private organisations. Small homes, that is, those with fewer than four places (Department of Health, 1996), were not included in the survey. For selecting the sample of local authority homes, the participating local authorities were asked to supply lists of their current homes, although two of the 21 local authorities did not manage any homes for elderly people. The A-Z Care Homes Data-on-

Disk database, distributed by A-Z Care Homes Guide, was used for selecting the sample of independent sector homes. The A-Z Care Homes database files were imported into a set of Excel spreadsheets, for residential homes and for dual registered and nursing homes. Dual registered homes were combined with residential care homes for the purpose of selecting the sample, and three separate sampling frames were constructed to select private residential and dual registered homes, voluntary residential and dual registered homes, and private and voluntary nursing homes. The information contained in the database enabled residential and dual registered homes for elderly people and elderly people with mental illness, and nursing homes for elderly people, to be selected for sampling purposes, although one dual registered home for elderly people with mental illness was omitted in the transfer of dual registered homes from the nursing home to the residential home spreadsheets.

A2.2.2 Procedure for selecting the sample of homes

As noted above, a sample size of 600 homes was originally proposed for the survey, and the number of homes selected for the survey was based on this figure, with an adjustment for unit nonresponse based on response rates in previous surveys. The selected local authorities included 291 local authority homes, 316 voluntary residential and dual registered homes, 1,931 private residential and dual registered homes and 843 registered nursing homes catering for elderly people, as shown in table A2.1. Assuming an overall response rate of 75 per cent, an achieved sample of 600 homes would require an initial sample of 800 homes. Local authority and voluntary homes were expected to yield higher response rates than private homes since the voluntary sector includes the majority of former local authority homes transferred from local authority management, and so it was decided to select 175 local authority homes, 175 voluntary residential homes, 225 private residential homes and 225 nursing homes, dual registered homes being included with voluntary and private residential homes. For an achieved sample of 150 homes in each category, response rates of 86 per cent would be required for local authority and voluntary residential homes and response rates of 67 per cent would be required for private residential and registered nursing homes. The PSSRU/CHE survey of independent residential and nursing homes conducted in 1986 achieved response rates of 79 per cent for independent residential homes and 70 per cent for registered nursing homes (Darton et al., 1989). Since the number of homes in London boroughs tends to be small, it was also decided to double the number of private residential homes and independent nursing homes selected in London authorities.

Before selecting the samples of homes from the lists, two groups of homes were removed. For the pilot studies for the cross-sectional survey, four local authority homes and 16 independent residential and nursing homes were selected in Kent and in Leeds. Secondly, a prospective study of 'The Quality of Life in Residential Care' was being conducted by colleagues in ten independent residential and nursing homes in Cheshire and ten in Manchester. For the selection of local authority homes, the

pilot study homes in Kent and Leeds were retained in the sampling lists and an additional sample was drawn to provide replacements for the six pilot study homes included in the sample selected initially. However, for the selection of independent sector residential and nursing homes the numbers involved were too large for such a procedure to be used, and these homes were removed from the lists. Table A2.2 shows the number of homes in each authority after these independent residential and nursing homes in Kent, Leeds, Cheshire and Manchester had been removed, although a nursing home in the study in Cheshire was not recorded as catering for elderly people in the A-Z Care Homes database and was therefore not included on the relevant sampling list. In addition, two of the pilot study homes in Leeds were not deleted, in error. One private residential home selected for the pilot study was not deleted, and a private nursing home was deleted instead of the adjacent private dual registered home selected for the pilot study. Thus table A2.2 includes 50 rather than 52 fewer homes than table A2.1. It was not feasible to amend the selection procedure to compensate for the reduced number of homes available in Kent, Leeds, Cheshire and Manchester. However, the weighting procedure used to adjust for unit nonresponse and to ensure representativeness by type of authority, described in section A2.5.3, below, was also intended to compensate for the exclusion of these homes.

The sampling procedure employed for the selection of homes was selection with probability proportional to size (Hoinville et al., 1978), size being defined as the number of places recorded on the sampling lists. For homes with no more than 20 residents, information about individual residents was requested for all residents, while for homes with more than 20 residents, corresponding information was requested for a sample of 20 residents, selected using a systematic sampling procedure administered by the interviewer and described in section A2.3, below. Samples of permanent and short-stay residents were selected separately, up to a maximum of 20 individuals in each case, short-stay residents being defined as those with a planned date of discharge. Since the probability of selection of some types of home in London was doubled, the relative probability of selection of the individuals in these homes was also doubled. Apart from this, the sample was designed to be approximately self-weighting for individuals, with two departures from self-weighting resulting from the separate treatment of permanent and short-stay residents and the complete enumeration of residents where there were no more than 20 in the home. In addition, homes were selected with probability proportional to size defined as the number of places, not the number of residents.

Homes were selected systematically from the sampling lists prepared for the four types of home and ordered by local authority, using fixed intervals in the cumulated number of places and a random number to select the starting point in the first interval (see Hoinville et al., 1978, for details). As noted above, for the selection of local authority homes a supplementary sample of six homes was selected to replace pilot study homes included in the sample selected initially. The supplementary

sample was selected with probability proportional to size from the entire set of unselected homes, excluding the remaining two pilot study homes. In the case of Cheshire, the list of local authority homes supplied for selecting the sample did not include the number of places for each home, but it was understood to be approximately 40 in each case. The most recent Department of Health statistics available showed that the 17 local authority homes had a total of 597 places as at 31st March 1995 (Department of Health, 1996), and so the number of places in each home was imputed from the average number of places per home: 35 places for the first 15 homes on the list and 36 places for the remaining two homes. Three local authority homes were larger than the selection interval in the cumulated number of places, and these homes were selected automatically, but none was selected more than once. For the selection of private residential and dual registered homes and independent nursing homes in London, the number of selected homes was doubled by halving the selection interval in the cumulated number of places. In the case of voluntary residential and dual registered homes and independent nursing homes, the selection interval in the cumulated number of places was shorter than the maximum home size, being 57 for voluntary residential and dual registered homes, 66 for nursing homes inside London and 131 for nursing homes outside London, and thus some homes were selected at least once. For nursing homes, five homes were selected twice, reducing the total sample of nursing homes from 243 to 238. However, for voluntary residential and dual registered homes, ten multiple selections were made, reducing the number of homes selected from 175 to 165, and six of these multiple selections were additional selections for the same home, with 362 places. Since this home was found to be catering largely for younger people with physical disabilities, it was excluded from the sample and a subsidiary sample of ten voluntary residential and dual registered homes was selected with probability proportional to size from the entire set of unselected homes, and thus the total sample of voluntary residential and dual registered homes was increased to 174. However, it was only possible to include nine of the additional voluntary residential and dual registered homes in the sample of homes approached to participate in the survey, the excluded home being a residential home in Barnet. Table A2.3 shows the final number of homes of each type selected, by local authority, totalling 823 homes, of which 822 were approached to participate in the survey.

A2.3 Procedure for Selecting a Sample of Residents

In cases where there were more than 20 permanent or more than 20 short-stay residents, interviewers were instructed to employ a systematic sampling procedure for selecting a sample of residents, using lists of residents obtained from the manager of the home. Using a random starting point corresponding to the last digit of the home's telephone number, residents were selected systematically as follows:

Number of residents	Procedure
21-40	Every other person, until reach 20
41-60	Every third person, until reach 20
61-80	Every fourth person, until reach 20
81-100	Every fifth person, until reach 20
101-120	Every sixth person, until reach 20
121-140	Every seventh person, until reach 20
141-160	Every eighth person, until reach 20
161-180	Every ninth person, until reach 20
181-200	Every tenth person, until reach 20

Interviewers were instructed to continue through the list a second time if they reached the end of the list without having selected the required number of 20 residents. If an individual resident was selected a second time, the next person on the list was included in the sample instead. Where more than one list was provided, interviewers were instructed to select one case from each list in turn. Interviewers were also asked to record how the lists of residents were structured, in order to identify potential biases in the selection procedure.

A2.4 Response to the Survey

Table A2.4 shows the final response figures for the survey, and table A2.5 shows the number of usable responses to the survey obtained from homes and the number of responses which included data on residents as well as homes, by local authority. Interviews were obtained with managers of 675 homes, but the information collected for two homes was not entered into the dataset for analysis. One respondent subsequently reported that some of the information provided had been erroneous, and requested that their data be withdrawn from the survey, while in the second case the information was unusable because it covered two homes run by the same organisation. The 673 homes for which information was entered into the dataset represented 82 per cent of the original sample. A complete response, including information on residents, was obtained for 618 of these homes (75 per cent of the original sample). Information was obtained for 11,899 residents in the 618 homes, of whom 11,196 (94 per cent) were permanent and 703 (6 per cent) were short-stay, and 7,474 members of staff provided completed staff questionnaires.

Overall, 95 per cent of local authority homes provided a response to the survey, and 91 per cent provided a complete response, compared with figures of 78 per cent and 71 per cent for independent homes. The response rate for complete responses from all homes ranged from 64 per cent to 100 per cent, and was higher in metropolitan districts (84 per cent) than in London boroughs

(79 per cent) and counties (71 per cent), reflecting the relative proportions of local authority and independent sector homes in the different types of authority. Response rates for individual authorities tended to be more variable in London and in metropolitan districts, ranging from 67 to 100 per cent in London and from 69 to 93 per cent in metropolitan districts, compared with 64 to 78 per cent in counties. This reflected the greater variability in the relative proportions of local authority and independent sector homes in London and metropolitan districts.

Table A2.6 shows the response rates for different types of home, based on complete responses. As anticipated during the planning of the survey, the overall response rate for voluntary residential and dual registered homes was higher than for private homes, 80 per cent compared with 64 per cent, although a larger proportion of private than voluntary dual registered homes responded. For nursing homes the response rate was 71 per cent, which was similar to that obtained in the 1986 survey (see above), whereas the response rate for independent residential and dual registered homes was lower than in the previous survey. Overall, however, the survey achieved its objective of obtaining a sample of 600 homes, and there were no serious shortfalls in the response rates for different types of home.

Table A2.6 also shows the number of residents for whom information was obtained and the total number of residents in the homes which provided a complete response. Residents in local authority and private residential homes were relatively over-represented in the sample, whereas residents in nursing homes were relatively under-represented. These differences reflect the relative sizes of the different types of home and their clientele, and the sampling procedure employed. The average sizes of local authority homes, private residential homes and independent nursing homes in the 21 surveyed authorities were 36 places, 19 places and 36 places respectively. As reported below, local authority homes accommodate the majority of short-stay residents, and thus the procedure used for sampling residents would have been likely to include a higher proportion of residents in local authority homes than in nursing homes. The average size of private residential homes was below the number from which sampling of residents was undertaken, and thus all residents would have been enumerated in the average-sized private residential home.

Table A2.7 shows the mean size of homes in the sample selected, for each type of home, and the corresponding information for homes which provided usable home-level data and for homes which provided a complete response. These figures are larger than the average sizes of homes in the surveyed authorities noted above because the sample of homes was selected with probability proportional to size. As may be seen from the table, the mean sizes of the respondent homes were similar to those for the sample as a whole, the largest difference being for voluntary dual registered homes. Among voluntary dual registered homes, the mean size of the respondent homes was 56.5 places, compared with an overall mean of 54.0 places. However, there were only 13 voluntary dual

registered homes among the respondents, and for the 12 homes which provided a complete response the mean size was 53.3 places.

In a number of cases, the type of home reported by the respondent differed from the type of home recorded on the sampling lists, principally due to an increase in dual registration, as shown in national statistics (Department of Health, 1997a). Differences between the type of home recorded on the sampling lists and the type of home stated by the respondent occurred for 51 of the 673 homes which provided usable home-level data, and for 47 of the 618 homes which provided a complete response. Table 2.8 shows the differences between the two sources of information on type of home for these two groups of respondents. For the purposes of the analyses presented in this report, the type of home has been reclassified to correspond to that stated by the respondent.

A2.5 Weighting for Analysis

A2.5.1 Introduction

The procedures used for selecting the sample of local authorities and the sample of homes are described in sections A2.1 and A2.2.2, above. The sample of local authorities selected for the survey was based on the sample drawn for the survey of admissions, adjusted to compensate for the over-representation of metropolitan districts in the admissions survey. However, although the representation of London boroughs and counties was improved in the cross-sectional survey, metropolitan districts remained over-represented, in terms of the proportions of residential and nursing homes in the selected metropolitan districts compared with those for metropolitan districts in England as a whole. Within the selected authorities, homes were selected with probability proportional to size, with different sampling fractions being used for the different types of home. In addition, the number of private residential and dual registered homes and the number of nursing homes selected in London were doubled, and a number of substitute homes were selected. Within the selected homes, information about individual residents was requested for all residents, if there were no more than 20 residents, and for a sample of 20 residents if there were more than 20 residents. Samples of permanent and short-stay residents were selected separately, up to a maximum of 20 individuals in each case, although no home had more than 20 short-stay residents.

In the interim report of the cross-sectional survey (Netten et al., 1997), the sampled residents were reweighted to represent the total number of residents in the homes which responded with complete information, but no weighting was employed to adjust for representativeness at the level of the type of authority, for varying selection probabilities at the home level, or for varying response rates. For the purpose of this report, both the home-level and the resident-level data have been weighted to ensure representativeness by type of authority and to adjust for varying selection probabilities and

response rates. In addition, in a number of cases the type of home reported by the respondent differed from the type of home recorded on the sampling lists, as noted in section A2.4, above. In such cases, the type of home has been reclassified to correspond to that stated by the respondent before weighting the data to correspond to the national distributions of provision by each type of home. Since the survey only yielded a small number of voluntary dual registered homes, private and voluntary dual registered homes have been combined for this report, without weighting the homes to allow for the larger sampling fraction used for voluntary homes. Finally, since different sampling fractions were used for the different types of home, overall estimates across homes have been obtained by weighting the data in proportion to the number of homes of each type in England.

A2.5.2 Weighting for unequal probabilities of selection of homes

The weights required to compensate for unequal probabilities of selection of homes are proportional to the reciprocals of the probabilities (Kish, 1965). In the case of selection with probability proportional to size, the weight for each unit is proportional to the reciprocal of the size measure. Since a number of adjustments were made to the sample, the weights have been calculated as if the final number of selected homes, shown in table A2.3, was obtained using a single procedure. As noted in section A2.2.2, the selection interval in the cumulated number of places was shorter than the maximum home size for local authority homes, voluntary residential and dual registered homes and nursing homes, and thus a number of homes were selected at least once. The weights for these types of homes were calculated as if the large homes, that is, those with at least as many places as the selection interval, were selected with certainty (with probability equal to 1) and the remaining members of the sample were selected from the remaining homes on the list, as described by Lehtonen and Pahkinen (1995). The relative weights obtained using this procedure are shown in table A2.9.

The weights shown in table A2.9 apply to the entire sample of 823 homes. Of these homes, 822 were approached to participate in the survey, 673 provided usable home-level data, and 618 provided a complete response, including information on residents. Thus the weights shown in table A2.9 have to be scaled to ensure that, for each type of home, weighted totals correspond to the total number of respondent homes. However, since the classification of the type of home has had to be amended to correspond to that stated by the respondent, where this differed from the information recorded on the sampling list, and, secondly, private and voluntary dual registered homes have been combined for this report, the scaling factors for the weights have been adjusted to correspond to the revised classification of homes. In addition, one nursing home with 17 residents, which was stated to be a private dual registered home by the respondent, was found to have a majority of residents aged under 65, and has been omitted from the analyses presented in this report. Thus the analyses presented in this report are based on 672 homes, 617 of which provided a complete response, and table A2.10 shows the scaling factors, expressed as percentages, for these two groups of homes.

A2.5.3 Weighting for national representativeness and nonresponse

The weighting and scaling factors contained in tables A2.9 and A2.10 were computed to adjust the data from respondent homes in order to compensate for the unequal probabilities of selection of homes. Further weighting of the data to adjust for unit nonresponse and to ensure representativeness by type of authority has been achieved in a single stage by weighting the data to represent the proportions of homes in the three types of authority. This procedure treats the respondent homes in each type of authority as an unbiased sample of homes. Since the type of home reported by the respondent differed, in a number of cases, from that recorded on the sampling lists, more complex adjustments for unit nonresponse using the information contained in the sampling lists were not feasible. As noted in section A2.2.2, homes included in the pilot studies for the survey and homes in Cheshire and Manchester included in a separate study were not included in the survey. The weighting procedure to adjust for unit nonresponse and to ensure representativeness by type of authority compensates for the exclusion of these homes, under the assumption that they form unbiased subsamples of homes from their particular type of authority. The weights used to adjust the data for this report do not incorporate weights to adjust for item nonresponse. Thus the estimates produced using the weighting procedure will be unbiased provided that the level of item nonresponse is proportionate to the number of observations in each weighting category.

Since the survey was undertaken in the autumn of 1996, national estimates of the distributions of homes by type of authority and of the distribution of different types of home at the time of the survey have been obtained by interpolating between the figures published by the Department of Health for 31st March 1996 and 31st March 1997, as necessary. For 1996, the Department of Health produced separate statistics for residential accommodation (Department of Health, 1997c) and nursing homes (Department of Health, 1997b), but combined statistics for residential and nursing homes were produced for 1997 (Department of Health, 1997a). Information on dual registered homes is included in the separate statistics for residential and nursing homes for 1996, and the 1997 statistics include summary information about residential and nursing homes for the years 1993 to 1997.

For nursing homes, the number of homes and the number of registered beds recorded by health authority for the financial year 1995-96 have been aggregated to the three groups of local authorities, as shown in table A2.11. For each type of local authority, the number of homes for elderly people has been estimated from the proportion of registered beds for elderly people. The overall proportion of registered beds for elderly people was slightly greater in dual registered homes (90.3 per cent) than in non dual registered homes (88.0 per cent), and so the estimates for dual registered homes and non dual registered homes have been scaled accordingly.

Table A2.12 shows estimates of the number of residential, dual registered and nursing homes for elderly people, including elderly mentally infirm people, for 31st March 1996 and 31st March 1997. The statistics of residential accommodation published by the Department of Health for 1996 record the number of local authority, voluntary and private residential homes for elderly people by type of local authority, and the number of local authority, voluntary and private residential homes for elderly mentally infirm people for England as a whole (Department of Health, 1997c). For each type of home, homes for elderly mentally infirm people have been assumed to have the same distribution by type of local authority as homes for elderly people. The statistics of residential accommodation published for 1996 include dual registered homes with voluntary and private residential homes. However, the equivalent figures included in a statistical bulletin containing the combined statistics for residential and nursing homes for 1997 are described as excluding dual registered homes (Department of Health, 1997a). The subsequent publication of detailed statistics on residential and nursing care homes (Department of Health, 1998a) indicates that dual registered homes had not been excluded from the figures for 1996 published in the statistical bulletin. The estimated number of voluntary and private residential homes shown in table A2.12 are based on the published figures available at the time, and are not adjusted for dual registered homes.

For dual registered homes, the statistics of residential accommodation for 1996 record the number of voluntary and private homes for elderly and elderly mentally infirm people for England as a whole. However, the total number of homes for all client groups recorded in the statistics of residential accommodation for 1996 was 1,101, compared with 1,455 homes recorded in the statistics of nursing home provision (Department of Health, 1997b). The statistics available for dual registered accommodation for 1997 (Department of Health, 1997a) continue the series reported in the statistics of residential accommodation for 1996, and so the total number of dual registered homes has been taken from these statistics. For each type of local authority, the number of dual registered homes has been estimated from the proportion of dual registered homes derived from the statistics of nursing home provision, shown in table A2.11. The relative proportions of voluntary and private dual registered homes in each type of authority have been assumed to correspond to the overall proportions of each type of home in England as a whole.

The combined statistics of residential and nursing home provision produced by the Department of Health for 1997 (Department of Health, 1997a) indicate that 3,167 of the 4,080 nursing homes identified in 1996 catered for elderly and elderly mentally infirm people, compared with the estimate of 3,590 homes shown in table A2.11. As in the case of dual registered homes, the total number of nursing homes in 1996 has been taken from the combined statistics, and the distribution of nursing homes by type of local authority has been estimated from the estimated distribution shown in table A2.11.

For 1997, statistics on the number of local authority, voluntary and private residential homes, dual registered homes and nursing homes for elderly and elderly mentally infirm people were available for England as a whole in the statistical bulletin available at the time (Department of Health, 1997a), and are shown in table A2.12. The separate estimates of the number of voluntary and private dual registered homes shown in the table are based on the assumption that all of the growth in dual registered homes between 1996 and 1997 occurred in the private sector, since the recent growth in dual registered homes has been concentrated almost entirely in this sector (Laing and Buisson, 1997).

The estimated distributions of homes by type of authority at the time of the survey are shown in table A2.13. For local authority residential homes, dual registered homes and nursing homes, the estimated distributions are based on the estimated distributions for 31st March 1996 obtained directly from table A2.12. However, as noted above, the treatment of dual registered homes in the statistics of residential accommodation for 1996 and the 1997 statistical bulletin, which includes summary information for the period 1993-1997, appeared to be inconsistent, although a subsequent publication indicated that the figures published in the statistical bulletin were incorrect. The distributions of voluntary and private residential homes by type of authority were calculated under both assumptions, and the figures shown in table A2.13 represent the mean of the two estimated distributions in each case, although in each case the difference between the two distributions was small. For dual registered homes, separate estimates have been made of the number of voluntary and private homes at 31st March 1997, but the distributions of voluntary and private homes by type of authority are based on the overall distribution, and thus the figures shown in table A2.13 are also based on the overall distribution.

The national distribution of different types of home is required for making overall estimates across homes, as noted above. For each type of home, the mid-point between the numbers of homes at 31st March 1996 and at 31st March 1997, shown in table A2.12, has been used to estimate the number of homes at the time of the survey, and the distribution across the types of home is shown in table A2.13 in the 'all authorities' row. No adjustment has been made for the discrepancy between the classification of dual registered homes in the statistics of residential accommodation published for 1996 and the corresponding figures published for 1997.

In addition to the national estimates of the distributions of homes by type of authority and of the distribution of different types of home, table A2.13 shows the corresponding distributions for the 672 respondent homes included in the analyses of home-level data and the 617 homes which provided home-level and resident data, weighted to compensate for unequal probabilities of selection. The table also shows the scaling factors, expressed as percentages, which are required to adjust the data for each type of home, following weighting for unequal probabilities of selection, to

represent the proportions of homes in the three types of authority, and the scaling factors to obtain overall estimates across homes (shown in the 'all authorities' rows). Table A2.14 shows, for the two groups of respondent homes, the number of homes by type of authority and type of home, weighted to compensate for unequal probabilities of selection and scaled to adjust the distributions to represent the proportions of homes in each type of authority. The distributions of homes shown in table A2.14 correspond to the estimated distributions for England shown in table A2.13, and correspond to the distributions underlying the analyses of home-level and resident-level data presented later in this report. The differences between some of the totals shown in table A2.14 and the corresponding totals in tables A2.8 and A2.10 are due to the rounding of the weighted numbers of homes in table A2.14.

Table A2.15 is a corrected version of table A2.13, and shows corrected estimates of the distributions of voluntary and private residential homes by type of authority, after excluding dual registered homes, and the amended values for the scaling factors. Comparison with the figures shown in table A2.13 indicates that the use of the incorrect estimates would have had little effect on the accuracy of the figures presented in this report.

A2.5.4 Weighting for unequal probabilities of selection of residents

As noted above, information about individual residents was requested for all residents in the home, if there were no more than 20 residents, and for a sample of 20 residents if there were more than 20 residents. Samples of permanent and short-stay residents were selected separately, up to a maximum of 20 individuals in each case, although no home had more than 20 short-stay residents.

For the analysis of the resident data, the sample residents were weighted to represent the total number of residents in the homes which responded with complete information, following weighting for unequal probabilities of selection of homes and to adjust for representativeness at the level of the type of authority. As in the analyses of the home-level data, overall estimates across homes were obtained by weighting the data to correspond to the estimated national distribution of different types of home, using the scaling factors shown in table A2.13.

In the tables of information about residents presented in this report, the number of individuals shown for each category is the weighted number of individuals for whom the relevant information was obtained, and the overall total number of individuals is the sum of the numbers in each category. As shown in table A2.6, information was obtained for 11,899 residents, out of a total of 20,226 residents in the 618 homes which provided a complete response. However, as noted above, one home with 17 residents had a majority of residents aged under 65, and has been omitted from the analyses presented in this report. Thus the information on residents in this report is based on 11,882

residents in 617 homes. Although these 617 homes accommodated 20,209 residents, the weighted total number of residents was smaller than this because the weighting procedure incorporated weights for unequal probabilities of selection of homes and to adjust for representativeness. Table A2.16 shows the unweighted and weighted number of residents by type of home, and includes the weighted number of residents for overall estimates across homes. For the purpose of statistical tests, the weighted total should be rescaled to correspond to the achieved sample size in order to avoid overestimating the number of statistically significant differences.

Table A2.1: Sampling frame: Number of homes and places by local authority

<i>Local authority</i>	<i>Residential homes for elderly people</i>						<i>Dual registered homes</i>				<i>Nursing homes</i>	
	<i>Local authority homes</i>		<i>Voluntary homes</i>		<i>Private homes</i>		<i>Voluntary homes</i>		<i>Private homes</i>		<i>Homes</i>	<i>Beds</i>
	<i>Homes</i>	<i>Places</i>	<i>Homes</i>	<i>Places</i>	<i>Homes</i>	<i>Places</i>	<i>Homes</i>	<i>Beds</i>	<i>Homes</i>	<i>Beds</i>		
Barnet	8	416	17	693	31	590	4	236	0	0	11	390
Haringey	0	0	6	182	9	144	0	0	0	0	9	290
Harrow	3	111	3	106	26	379	1	96	2	73	7	306
Lewisham	6	275	1	25	24	336	0	0	2	124	21	574
Newham	7	252	3	87	2	32	0	0	0	0	2	28
Southwark	5	251	2	36	0	0	0	0	1	63	4	207
Sutton	4	137	6	164	21	311	0	0	0	0	23	556
Sub-total	33	1442	38	1293	113	1792	5	332	5	260	77	2351
Doncaster	14	469	3	51	29	733	1	53	9	334	22	708
Leeds	30	1166	10	267	61	1108	2	272	3	142	50	2056
Manchester	1	18	27	858	50	935	3	195	7	303	39	1613
Sandwell	10	439	0	0	19	342	0	0	0	0	21	931
Sefton	14	374	16	511	91	1721	4	155	3	133	66	2050
South Tyneside	9	360	2	66	19	485	0	0	1	41	7	374
Stockport	6	168	10	327	36	603	0	0	4	142	22	763
Tameside	0	0	2	62	35	960	0	0	3	110	13	539
Sub-total	84	2994	70	2142	340	6887	10	675	30	1205	240	9034
Cheshire	17	597	46	1459	69	1536	2	402	9	335	84	3851
Devon	36	973	42	1077	509	9033	4	174	39	1478	118	3712
Kent	35	1321	37	1231	416	8275	4	135	29	1285	115	3691
Norfolk	38	1280	11	334	169	3335	0	0	10	366	53	1833
Nottinghamshire	38	1436	21	542	118	2096	2	92	19	777	113	4215
Warwickshire	10	336	23	749	53	921	1	66	3	102	43	1588
Sub-total	174	5943	180	5392	1334	25196	13	869	109	4343	526	18890
Total	291	10379	288	8827	1787	33875	28	1876	144	5808	843	30275

Sources: Local authority-supplied lists of local authority homes
A-Z Care Homes Data-on-Disk

Table A2.2: Amended sampling frame: Number of homes and places by local authority

<i>Local authority</i>	<i>Residential homes for elderly people</i>						<i>Dual registered homes</i>				<i>Nursing homes</i>	
	<i>Local authority homes</i>		<i>Voluntary homes</i>		<i>Private homes</i>		<i>Voluntary homes</i>		<i>Private homes</i>		<i>Homes</i>	<i>Beds</i>
	<i>Homes</i>	<i>Places</i>	<i>Homes</i>	<i>Places</i>	<i>Homes</i>	<i>Places</i>	<i>Homes</i>	<i>Beds</i>	<i>Homes</i>	<i>Beds</i>		
Barnet	8	416	17	693	31	590	4	236	0	0	11	390
Haringey	0	0	6	182	9	144	0	0	0	0	9	290
Harrow	3	111	3	106	26	379	1	96	2	73	7	306
Lewisham	6	275	1	25	24	336	0	0	2	124	21	574
Newham	7	252	3	87	2	32	0	0	0	0	2	28
Southwark	5	251	2	36	0	0	0	0	1	63	4	207
Sutton	4	137	6	164	21	311	0	0	0	0	23	556
Sub-total	33	1442	38	1293	113	1792	5	332	5	260	77	2351
Doncaster	14	469	3	51	29	733	1	53	9	334	22	708
Leeds	30	1166	7	190	57	1038	1	89	3	142	43	1781
Manchester	1	18	27	858	48	873	2	135	6	241	33	1305
Sandwell	10	439	0	0	19	342	0	0	0	0	21	931
Sefton	14	374	16	511	91	1721	4	155	3	133	66	2050
South Tyneside	9	360	2	66	19	485	0	0	1	41	7	374
Stockport	6	168	10	327	36	603	0	0	4	142	22	763
Tameside	0	0	2	62	35	960	0	0	3	110	13	539
Sub-total	84	2994	67	2065	334	6755	8	432	29	1143	227	8451
Cheshire	17	597	37	1156	69	1536	2	402	9	335	84	3851
Devon	36	973	42	1077	509	9033	4	174	39	1478	118	3712
Kent	35	1321	33	1055	412	8237	4	135	27	1228	109	3509
Norfolk	38	1280	11	334	169	3335	0	0	10	366	53	1833
Nottinghamshire	38	1436	21	542	118	2096	2	92	19	777	113	4215
Warwickshire	10	336	23	749	53	921	1	66	3	102	43	1588
Sub-total	174	5943	167	4913	1330	25158	13	869	107	4286	520	18708
Total	291	10379	272	8271	1777	33705	26	1633	141	5689	824	29510

Sources: Local authority-supplied lists of local authority homes
A-Z Care Homes Data-on-Disk

Table A2.3: Sample selection: Number of homes selected by local authority (final)

<i>Local authority</i>	<i>Residential and dual registered homes</i>									<i>Nursing homes</i>		
	<i>Local authority homes</i>			<i>Voluntary homes</i>			<i>Private homes</i>			<i>Total homes</i>	<i>Sample homes</i>	<i>Multiple selections</i>
	<i>Total homes</i>	<i>Sample homes</i>	<i>Multiple selections</i>	<i>Total homes</i>	<i>Sample homes</i>	<i>Multiple selections</i>	<i>Total homes</i>	<i>Sample homes</i>	<i>Multiple selections</i>			
Barnet	8	7	0	21	15 ¹	2	31	6	0	11	6	0
Haringey	0	0	0	6	4	0	9	2	0	9	4	1
Harrow	3	2	0	4	2	1	28	5	0	7	3	1
Lewisham	6	4	0	1	1	0	26	5	0	21	9	0
Newham	7	4	0	3	1	0	2	1	0	2	0	0
Southwark	5	5	0	2	1	0	1	1	0	4	4	0
Sutton	4	2	0	6	4	0	21	3	0	23	8	0
Sub-total	33	24	0	43	28	3	118	23	0	77	34	2
Doncaster	14	8	0	4	1	0	38	6	0	22	6	0
Leeds	30	17	0	8	4	1	60	7	0	43	12	1
Manchester	1	0	0	29	19	0	54	6	0	33	9	1
Sandwell	10	7	0	0	0	0	19	2	0	21	7	0
Sefton	14	8	0	20	12	0	94	11	0	66	15	1
South Tyneside	9	6	0	2	2	0	20	3	0	7	3	0
Stockport	6	3	0	10	6	0	40	4	0	22	6	0
Tameside	0	0	0	2	1	0	38	6	0	13	4	0
Sub-total	84	49	0	75	45	1	363	45	0	227	62	3
Cheshire	17	10	0	39	22	0	78	11	0	84	29	0
Devon	36	17	0	46	23	0	548	60	0	118	29	0
Kent	35	22	0	37	22	0	439	54	0	109	26	0
Norfolk	38	22	0	11	7	0	179	21	0	53	14	0
Nottinghamshire	38	25	0	23	12	0	137	16	0	113	32	0
Warwickshire	10	6	0	24	15	0	56	6	0	43	12	0
Sub-total	174	102	0	180	101	0	1437	168	0	520	142	0
Total	291	175	0	298	174	4	1918	236	0	824	238	5

Note: 1. One home was not approached to participate in the survey.

Table A2.4: Final response figures for the survey

<i>Response category</i>	<i>Number of homes</i>	
	<i>No.</i>	<i>%</i>
Homes issued	822	100
<i>Deadwood</i>		
Home untraceable	3	<1
Home no longer in business	6	<1
Total deadwood	9	1
Homes available for interview	813	99
<i>Reasons for nonresponse</i>		
No reply	2	<1
Respondent not available	17	2
Respondent away	6	<1
Respondent ill	5	<1
Proxy refusal	8	<1
Personal refusal	46	6
Broke appointment	7	<1
Other reasons	47	6
Total nonresponse	138	17
Homes interviewed	675	82
<i>Data entry</i>		
Respondent withdrew consent	1	<1
Data not useable	1	<1
Questionnaires for homes entered in dataset	673	82
Homes with resident data	618	75

Table A2.5: Response to the survey by local authority

<i>Local authority</i>	<i>Number of homes in sample</i>	<i>Responses</i>		<i>Response rates (%)</i>	
		<i>Total number</i>	<i>Number with resident data</i>	<i>Total</i>	<i>With resident data</i>
Barnet	33	29	28	88	85
Haringey	10	10	7	100	70
Harrow	12	10	8	83	67
Lewisham	19	16	13	84	68
Newham	6	6	6	100	100
Southwark	11	9	8	82	73
Sutton	17	16	15	94	88
Sub-total	108	96	85	89	79
Doncaster	21	17	16	81	76
Leeds	40	36	34	90	85
Manchester	34	30	30	88	88
Sandwell	16	11	11	69	69
Sefton	46	40	40	87	87
South Tyneside	14	13	13	93	93
Stockport	19	17	15	89	79
Tameside	11	10	10	91	91
Sub-total	201	174	169	87	84
Cheshire	72	55	46	76	64
Devon	129	98	89	76	69
Kent	124	98	86	79	69
Norfolk	64	52	50	81	78
Nottinghamshire	85	68	65	80	76
Warwickshire	39	32	28	82	72
Sub-total	513	403	364	79	71
Total	822	673	618	82	75
Local authority homes	175	167	160	95	91
Independent homes	647	506	458	78	71

Table A2.6: Response to the survey by type of home

<i>Type of home</i>	<i>Number of homes in sample</i>	<i>Number of complete responses</i>	<i>Response rate</i>	<i>Complete responses</i>			
				<i>Number of residents in sample</i>		<i>Total number of residents in sampled homes</i>	
				<i>No.</i>	<i>%</i>	<i>No.</i>	<i>%</i>
<i>Residential homes</i>							
Local authority	175	160	91	3542	29.8	5476	27.1
Voluntary	153	127	83	2424	20.4	4112	20.3
Private	200	122	61	1969	16.5	2433	12.0
<i>Dual registered homes</i>							
Voluntary	20	12	60	246	2.1	513	2.5
Private	36	29	81	554	4.7	1067	5.3
<i>Nursing homes</i>							
	238	168	71	3164	26.6	6625	32.8
Total	822	618	75	11899	100.0	20226	100.0

Table A2.7: Mean size of selected and respondent homes by type of home

<i>Information</i>	<i>Residential homes</i>			<i>Dual registered homes</i>		<i>Nursing homes</i>
	<i>Local authority homes</i>	<i>Voluntary homes</i>	<i>Private homes</i>	<i>Voluntary homes</i>	<i>Private homes</i>	
<i>Homes in sample (822 homes)</i>						
Number of homes	175	153	200	20	36	238
Mean size	38.2	35.0	23.5	54.0	45.0	45.8
<i>Total responses (673 homes)</i>						
Number of homes	167	136	136	13	30	191
Mean size	38.0	35.2	23.1	56.5	43.8	45.3
<i>Responses with resident data (618 homes)</i>						
Number of homes	160	127	122	12	29	168
Mean size	38.1	35.2	22.9	53.3	44.3	45.3

Table A2.8: Type of home recorded on sampling frame and in interview

<i>Type of home on sampling frame</i>	<i>Type of home from interview</i>						<i>Total</i>
	<i>Local authority residential</i>	<i>Voluntary residential</i>	<i>Private residential</i>	<i>Voluntary dual registered</i>	<i>Private dual registered</i>	<i>Nursing</i>	
<i>Total responses</i>							
Local authority residential	167						167
Voluntary residential		121	13	2			136
Private residential		1	135				136
Voluntary dual registered				12		1	13
Private dual registered				1	29		30
Nursing					33 ¹	158	191
Total	167	122	148	15	62	159	673
<i>Responses with resident data</i>							
Local authority residential	160						160
Voluntary residential		112	13	2			127
Private residential		1	121				122
Voluntary dual registered				11		1	12
Private dual registered				1	28		29
Nursing					29 ¹	139	168
Total	160	113	134	14	57	140	618

Note: 1. One home with 17 residents was omitted from subsequent analyses.

Table A2.9: Number of homes selected and relative weights by type of home (as recorded on sampling frame)

<i>Type of home on sampling frame</i>	<i>Selection probability = 1</i>				<i>Selection probability < 1</i>			
	<i>London</i>		<i>Elsewhere</i>		<i>London</i>		<i>Elsewhere</i>	
	<i>No. of homes</i>	<i>Rel. wt</i>	<i>No. of homes</i>	<i>Rel. wt</i>	<i>No. of homes</i>	<i>Relative weight</i>	<i>No. of homes</i>	<i>Relative weight</i>
Local authority residential	3	1	0	-	21	59.02/no. places	151	59.02/no. places
Voluntary residential	2	1	7	1	21	52.82/no. places	124	52.82/no. places
Private residential	0	-	0	-	21	89.22/no. places	179	175.31/no. places
Voluntary dual registered	4	1	7	1	1	52.82/no. places	8	52.82/no. places
Private dual registered	0	-	0	-	2	89.22/no. places	34	175.31/no. places
Nursing	4	1	7	1	30	67.40/no. places	197	132.25/no. places

Table A2.10: Scaling factors to reproduce the number of respondents, by type of home (reclassified)

<i>Information</i>	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>
	<i>Local authority homes</i>	<i>Voluntary homes</i>	<i>Private homes</i>		
<i>Total responses (672 homes)</i>					
Number of homes	167	122	148	76	159
Sum of selection weights	280.63	214.07	1213.88	263.27	524.64
Scaling factor (%)	59.51	56.99	12.19	28.87	30.31
<i>Responses with resident data (617 homes)</i>					
Number of homes	160	113	134	70	140
Sum of selection weights	268.78	199.16	1115.28	247.91	460.31
Scaling factor (%)	59.53	56.74	12.01	28.24	30.41

Table A2.11: Estimated number of nursing homes for elderly people in England, by type of local authority, financial year 1995-96

<i>Type of nursing home/ Type of authority</i>	<i>Number of homes</i>			<i>Number of registered beds</i>			
	<i>All nursing homes</i>	<i>Dual registered homes</i>	<i>Non dual registered homes</i>	<i>All nursing homes</i>		<i>Dual registered homes</i>	
				<i>Total beds</i>	<i>Elderly beds</i>	<i>Total beds</i>	<i>Elderly beds</i>
<i>All nursing homes</i>							
London boroughs	348	92	256	10694	8691		
Metropolitan districts	1274	317	957	45095	40341		
Counties	3913	1046	2867	123426	109717		
Total	5535	1455	4080	179215	158749	44936	40581
<i>Nursing homes for elderly people</i>							
London boroughs	283	76	207				
Metropolitan districts	1141	290	851				
Counties	3480	948	2532				
Total	4904	1314	3590				

Sources: Department of Health (1997b); district health authority tables from Department of Health statistical return KO36, financial year 1995-96.

Note: 1. Estimates shown in italic type.

Table A2.12: Estimated number of residential and nursing homes for elderly people in England, by type of local authority, 1996-1997

<i>Date of information/ Type of authority</i>	<i>Residential homes</i>			<i>Dual registered homes</i>			<i>Nursing homes</i>
	<i>Local authority homes</i>	<i>Voluntary homes</i>	<i>Private homes</i>	<i>Voluntary homes</i>	<i>Private homes</i>	<i>Total</i>	
<i>At 31st March 1996¹</i>							
London boroughs	<i>184</i>	<i>186</i>	<i>418</i>	<i>11</i>	<i>47</i>	<i>58</i>	<i>182</i>
Metropolitan districts	<i>385</i>	<i>247</i>	<i>1457</i>	<i>41</i>	<i>179</i>	<i>220</i>	<i>750</i>
Counties	<i>1056</i>	<i>809</i>	<i>6602</i>	<i>133</i>	<i>588</i>	<i>721</i>	<i>2235</i>
Total	<i>1625</i>	<i>1242</i>	<i>8477</i>	<i>185</i>	<i>814</i>	<i>999</i>	<i>3167</i>
<i>At 31st March 1997</i>							
Total	<i>1505</i>	<i>1172</i>	<i>7778</i>	<i>185</i>	<i>1256</i>	<i>1441</i>	<i>2901</i>

Sources: Department of Health (1997a), table E1; Department of Health (1997c), tables E3, E14 and L12.

Notes: 1. Figures for residential homes are those given in the published tables, and are not adjusted for dual registered homes.

2. Estimates shown in italic type.

Table A2.13: I. Distributions of residential and nursing homes for elderly people in England and for respondents to the survey, by type of local authority
II. Scaling factors to reproduce the estimated national distributions, by type of home (reclassified)

<i>Home group/ Type of authority</i>	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>
	<i>Local authority homes</i>	<i>Voluntary homes</i>	<i>Private homes</i>		
I. Distribution of homes (%)					
<i>England estimates, 1996-97</i>					
London boroughs	11.3	15.7	4.9	5.8	5.8
Metropolitan districts	23.7	19.7	16.9	22.0	23.7
Counties	65.0	64.6	78.2	72.2	70.5
All authorities (row %)	10.3	8.0	53.6	8.1	20.0
<i>Total responses (672 homes)</i>					
London boroughs	12.0	14.8	8.8	3.9	10.7
Metropolitan districts	26.9	27.9	15.5	26.3	31.4
Counties	61.1	57.4	75.7	69.7	57.9
All authorities (row %)	24.9	18.2	22.0	11.3	23.7
<i>Responses with resident data (617 homes)</i>					
London boroughs	11.9	14.2	8.2	2.9	10.0
Metropolitan districts	28.1	29.2	16.4	28.6	33.6
Counties	60.0	56.6	75.4	68.6	56.4
All authorities (row %)	25.9	18.3	21.7	11.3	22.7
II. Scaling factors (%)					
<i>Total responses (672 homes)</i>					
London boroughs	94.17	106.08	55.68	148.72	54.21
Metropolitan districts	88.10	70.61	109.03	83.65	75.48
Counties	106.38	112.54	103.30	103.59	121.76
All authorities	41.37	43.96	243.64	71.68	84.39
<i>Responses with resident data (617 homes)</i>					
London boroughs	94.96	110.56	59.76	200.00	58.00
Metropolitan districts	84.34	67.47	103.05	76.92	70.54
Counties	108.33	114.13	103.71	105.25	125.00
All authorities	39.77	43.72	247.00	71.68	88.11

Table A2.14: Weighted number of respondent homes by type of local authority

<i>Type of authority</i>	<i>Residential homes</i>			<i>Dual reg. homes</i>	<i>Nursing homes</i>
	<i>Local authority homes</i>	<i>Voluntary homes</i>	<i>Private homes</i>		
<i>Total responses (672 homes)</i>					
London boroughs	19	19	7	4	9
Metropolitan districts	39	24	25	17	38
Counties	109	79	116	55	112
Total	167	122	148	76	159
<i>Responses with resident data (617 homes)</i>					
London boroughs	18	17	7	5	8
Metropolitan districts	38	22	22	15	33
Counties	104	73	105	51	99
Total	160	112	134	71	140

Table A2.15: I. Distributions of residential and nursing homes for elderly people in England (corrected) and for respondents to the survey, by type of local authority
II. Scaling factors to reproduce the estimated national distributions, by type of home (reclassified)

<i>Home group/ Type of authority</i>	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>
	<i>Local authority homes</i>	<i>Voluntary homes</i>	<i>Private homes</i>		
I. Distribution of homes (%)					
<i>England estimates, 1996-97</i>					
London boroughs	11.3	16.6	4.8	5.8	5.8
Metropolitan districts	23.7	19.5	16.7	22.0	23.7
Counties	65.0	64.0	78.5	72.2	70.5
All authorities (row %)	10.7	7.6	52.7	8.3	20.7
<i>Total responses (672 homes)</i>					
London boroughs	12.0	14.8	8.8	3.9	10.7
Metropolitan districts	26.9	27.9	15.5	26.3	31.4
Counties	61.1	57.4	75.7	69.7	57.9
All authorities (row %)	24.9	18.2	22.0	11.3	23.7
<i>Responses with resident data (617 homes)</i>					
London boroughs	11.9	14.2	8.2	2.9	10.0
Metropolitan districts	28.1	29.2	16.4	28.6	33.6
Counties	60.0	56.6	75.4	68.6	56.4
All authorities (row %)	25.9	18.3	21.7	11.3	22.7
II. Scaling factors (%)					
<i>Total responses (672 homes)</i>					
London boroughs	94.17	121.16	54.55	148.72	54.21
Metropolitan districts	88.10	69.89	107.74	83.65	75.48
Counties	106.38	111.50	103.70	103.59	121.76
All authorities	42.97	41.76	239.55	73.45	87.34
<i>Responses with resident data (617 homes)</i>					
London boroughs	94.96	116.90	58.54	200.00	58.00
Metropolitan districts	84.34	66.78	101.83	76.92	70.54
Counties	108.33	113.07	104.11	105.25	125.00
All authorities	41.31	41.53	242.86	73.45	91.19

Table A2.16: Unweighted and weighted number of residents in respondent homes, by type of local authority

Weighting	<i>Residential homes</i>			<i>Dual registered homes</i>	<i>Nursing homes</i>	<i>Total</i>
	<i>Local authority homes</i>	<i>Voluntary homes</i>	<i>Private homes</i>			
Unweighted	3542	2173	2180	1355	2632	11882
Within home type	5028	3142	2205	2279	4491	17145
Across home type	2000	1374	5446	1634	3957	14410

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