

# PSSRU

Personal Social Services  
Research Unit

[www.ukc.ac.uk/PSSRU/](http://www.ukc.ac.uk/PSSRU/)

---

## Downloaded publication in Acrobat format

The PSSRU retains the  
copyright in this publication.

It may be freely distributed as  
an Acrobat file and on paper,  
but all quotations must be  
acknowledged and permission  
for use of longer excerpts must  
be obtained in advance.

We welcome comments about  
PSSRU publications. We would  
particularly appreciate being  
told of any problems  
experienced with electronic  
versions as otherwise we may  
remain unaware of them.

Email: [pssru\\_library@ukc.ac.uk](mailto:pssru_library@ukc.ac.uk)

## Elderly people in residential care: Survey design for SSA and other purposes

**Andrew Bebbington, Ann Netten  
and Robin Darton**

PSSRU discussion paper 1125/3  
February 1995

---

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:

Cornwallis Building, University of Kent at Canterbury, Canterbury, Kent, CT2 7NF, UK

London School of Economics, Houghton Street, London, WC2A 2AE, UK

University of Manchester, Dover Street Building, Oxford Road, Manchester, M13 9PL, UK

The PSSRU Bulletin and publication lists can be viewed and downloaded from the Unit's website and are available free from the unit librarian in Canterbury (+44 (0)1227 837773; email [pssru\\_library@ukc.ac.uk](mailto:pssru_library@ukc.ac.uk)).

**ELDERLY PEOPLE IN RESIDENTIAL CARE**  
**SURVEY DESIGN FOR SSA AND OTHER PURPOSES**

**A paper for information and discussion with Local Government Representative Bodies**

**Andrew Bebbington and Ann Netten with Robin Darton and Bleddyn Davies<sup>1</sup>**

PSSRU Discussion Paper 1125/3: June 1995.

---

<sup>1</sup> Our thanks to David Challis for his invaluable advice.

## CONTENTS

SUMMARY .....	- 3 -
1. INTRODUCTION .....	- 5 -
2. STANDARD SPENDING ASSESSMENT FORMULAE .....	- 6 -
3. DEPENDENCY AND COSTS .....	- 15 -
4. OTHER RESIDENTS .....	- 17 -
5. APPROPRIATENESS OF PLACEMENTS .....	- 18 -
6. SURVEY DESIGN .....	- 19 -
Admissions study .....	- 19 -
Longitudinal follow-up .....	- 21 -
Cross-sectional study .....	- 22 -
7. CONCLUSION .....	- 25 -

## SUMMARY

1. This report proposes a survey of residential care (used here to encompass both residential and nursing home care) which has the purpose of improving SSA formulae for elderly people, and for which the Department of Health has identified related interests, including:
  - the need for new analyses of the relationship between costs and dependency;
  - information about non-publicly funded residents;
  - appropriateness of placement decisions.

2. For SSA purposes (section 2 of the report), the study will:
  - lead to new estimates of the relative need for supported residential care under the new Community Care arrangements, based principally on an analysis of the circumstances of people currently being admitted, compared with elderly people generally;
  - investigate whether the inclusion of the socio-demographic factors about elderly people living in an area would improve the estimate of the likely average cost of residential care under a standard level of services.

*Readers interested primarily in SSA aspects of the study need read only sections 1 and 2, together with the methodology described in section 6 (admissions study, subsections 6.1-6.8).*

3. Information about the relationship between dependency and costs would provide a basic building block of information which could be used for a number of analyses, including estimating national costs of provision, making cost projections and the estimation of lifetime costs of people admitted at different levels of dependency (sections 3 of the report). This last is of particular importance: the Audit Commission have identified the problems associated with local authorities taking on caring commitments with no clear idea how long these will last.
4. The type of information collections required to explore these issues would have a wide variety of applications, including the appropriateness of placements in residential care (sections 4 and 5 of the report). These will be greatly enhanced by links with other ongoing and proposed research studies.
5. A three part survey is proposed (section 6 of the report):

An Admissions study would identify elderly people who will have a significant financial impact on local authority resources committed to residential care. This includes those people:

- for whom the decision has been made that they are to be admitted to residential care;
- who have been admitted on an emergency basis and need to be at least financially assessed by the local authority;
- who are already in residential care who are being assessed because they no longer have the resources to pay for residential care;
- who are moving from one home to another with important cost implications.

Data would be collected about the characteristics of the person being admitted and the home they are being admitted to (see Box 1).

6. A Longitudinal follow-up study would provide information about:

- how long people stay in residential care and mortality;
- destinational outcomes;
- changes in dependency and financial arrangements over time. (see Box 4)

7. A Cross-sectional study would identify:

- the characteristics of the resident population currently in residential care;
- the characteristics of homes, including some assessment of quality of care;
- the characteristics of short stay emergency, NHS and private funded admissions to homes. (see Box 3)

8. Other studies that would provide valuable links include:

- an ongoing study of quality of life in residential care (led by Anthony Mann);
- a proposed longitudinal study of quality of life in residential care (led by Peter Huxley);
- an evaluation of community care of elderly people (ECCEP, led by Bleddyn Davies)
- the current programme of mixed economy of care (MEOC, led by Martin Knapp);
- validation and development of Resource Utilisation Groups (RUGS, led by Iain Carpenter).

9. At the time of writing a survey of admissions and the first wave of the longitudinal follow-up have been commissioned, though design details remain to be finalised in consultation with all interested parties. Outline approval has been given for the cross-sectional survey of homes. The earliest completion dates for the main field work and analysis of these studies is as follows:

- Admissions survey: May 1996.
- Longitudinal survey (first wave): December 1996.
- Cross-sectional survey (subject to contract): December 1996.

10. The value of a three part linked survey is that it will allow a wide variety of analyses and provide a benchmark from which future changes in the role and characteristics of residential care can be measured. The proposed methodology should allow a wide variety of comparisons to be made, over time, cross-sectorally and cross-nationally.

## 1. INTRODUCTION

- 1.1 There is widespread interest in whether the characteristics of those entering residential care have changed since 1 April 1993 and, if so, whether there are financial consequences of these changes. To a large extent this interest stems from the change in arrangements for assessing and financing elderly people in need of residential care and in the role of the NHS in providing long term care. To the extent that current funding formulae reflect local variations in the need for and cost of provision they are based on dated information reflecting the social care world before the advent of the NHS and Community Care Act 1990.
- 1.2 Under the new arrangements local authorities bear considerable financial responsibility for elderly people in need of residential and nursing home care. A central principle underlying Standard Spending Assessments is that public funds should be distributed equitably to allow for area variations in the financial responsibilities that are beyond the control of local authorities. However, at present there is insufficient information to allow precisely for these area variations in expenditure on residential and nursing home care. This proposed survey of publicly funded admissions will allow comparison across authorities of key characteristics that affect local demand for residential care (taken to include nursing homes) and the financial implications of this demand. There is also considerable interest in the changing patterns of admission as a result of the reforms: for example, changes in levels of dependency on admission and the implications of this for the future population of residential care and nursing homes.
- 1.3 This paper considers the design of a proposed survey of residential care (in its widest sense) which has the purpose of improving SSA formulae for elderly people. Readers interested primarily in SSA aspects of the study need read only sections 1 and 2, together with the methodology described in section 6 (admissions study, subsections 6.1-6.8).
- 1.4 In addition, the Department of Health has identified related interests, which include:
- the need for new analyses of the relationship between costs and dependency (section 3);
  - information about non-publicly funded residents (section 4);
  - appropriateness of placement decisions (section 5).
- 1.5 The design requirements for all these elements are drawn together in section 6, which proposes a three-part study. Section 7 brings together all our recommendations for a combined study which will address each of these separate issues.

## 2. STANDARD SPENDING ASSESSMENT FORMULAE

2.1 For the improvement of Standard Spending Assessments, the survey needs to lead to the development of formulae which may be used to estimate (a) the number of potential elderly supported residents for services and (b) the associated cost per client; for each local authority under a standard level of service. These formulae may be developed:

- for all residential care services;
- separately for residential homes and nursing homes;
- for all social services, combining residential and domiciliary care into a single formula.

For SSA purposes cost factors are only of concern in so far as they arise from the circumstances of potentially supported residents.

### 2.2 SSA Principles.

The principles behind the development of formulae for PSS SSA's are well established and require only an outline description here. They concern the estimation of the number of people in a local authority who, under a standard level of service would be judged to require services of a given standard, and the cost to the local authority of purchasing those services. These formulae should

- depend on factors that are straightforward to measure on a routine basis, which have a demonstrable and quantifiable link with needs and costs, and are outside the influence of local authorities (particularly through past decisions about services);
- measure *variations* between local authorities in needs and in costs of support under a standard level of service. The formulae are not concerned with the absolute level of expenditure need, nor with the short-run implications of actual funding arrangements;
- be as simple as possible.

Allowance should be made for the availability of substitute services supplied by other providers (including informal carers) which may affect the need for local authority support, and the contribution people may make financially to their own support.

In practice, formulae are developed for groups of people who correspond to the major service packages of care, such as residential care and its substitutes, and for the price of such care. (In principle, equity between local authorities should be sought in providing them with the means to achieve equivalent outcomes of social care most efficiently rather than in equal services).

Simplicity is sought by

- restricting the factors to be included to a minimum, by including only those for which a clear and significant influence on need can be demonstrated;
- minimising the number of groups, and hence the number of formulae, to be included. Combining groups is justified where variations between authorities in the predicted expenditure need from the combined group is similar to that when the groups are treated separately<sup>2</sup>.

Subsections 2.3 - 2.15 describe an approach in which there is one formula applying to all people who might be supported in residential care or its substitutes, under a standard level of service,

---

<sup>2</sup> This usually occurs where there is a high correlation across authorities in the predicted size of groups: where the ratio of those in the high need group to those in the low need group is fairly constant.

dealing with estimation of needs and unit costs in turn. The practical implications of needing to form separate formulae for residential and nursing homes, or of combining both domiciliary and residential supported elderly clients into a single group, is considered in subsection 2.16 - 2.21. Subsections 2.22 - 2.28 summarise the information requirements of the proposed approach.

### 2.3 Predicting demand.

The approach used to predict demand is to estimate the number of people living in a local authority who might be expected to need services under a standard level of service. The preferred approach is to compare people nationally who do and do not receive residential care services, so as to identify socio-demographic factors that are predictive of service receipt<sup>3</sup>. The factors of interest are associated with need, and exclude those which might relate to access to such services.

2.4 For residential care however, there is a problem with this general approach in that the socio-circumstances of those currently in care are of limited comparability with those of people who continue to live in other forms of accommodation (chiefly private households). There is a reasonable evidence that people enter residential care for reasons that are correlated with, and influenced by, readily measurable socio-demographic factors such as age, sex, limiting long-standing illness, migration, social class, household composition, housing and close neighbourhood characteristics, as well as utilization of health services. Once in residential care establishments, many of these characteristics are no longer relevant. The implication is that it will be much harder to predict need for residential care among people who are already residents, or indeed in any form of communal establishment. This difficulty was demonstrated by the PSSRU 1981 survey of residential care which was undertaken specifically for this purpose. It was not possible to establish a method that would predict the levels of dependency<sup>4</sup> (particularly numbers who might be above some lower need threshold) among people already provided with residential care, from socio-demographic factors that are relatively easy to measure routinely within standard data sets<sup>5</sup>. It partly helps if one assumes that those people living in residential establishments who are not supported by local authorities are not in need of support, though this assumption is clearly dubious. Even so, it leaves the problem of estimating need among those people who are currently supported. It is not sufficient to assume that all people who are currently supported would be in need under a standard level of service.

---

<sup>3</sup> The approach implies that the circumstances of people in residential care will be used to stand proxy for all people who use residential care *and its substitutes*. The latter nowadays includes people receiving highly supportive domiciliary care over an extended period at a cost to the social services department which matches or exceeds residential care. People supported in some very sheltered housing schemes are in a similar position. The boundary chosen for the present study is partly in the interests of having a clear-cut and fairly easily implemented definition, and on the assumption that the people receiving these substitute services are similar in their circumstances to those in long-stay residential care, and that their numbers are small relative to the total of elderly people living outside residential care. See also section 6.

<sup>4</sup> Measured here by functional disability, ill health, and mental state.

<sup>5</sup> The DH RA return contains just age, long or short stay admission, and type of home. The Census contains a limited amount of information including age, sex and marital status, ethnic group, migration employment status, limiting longstanding illness (LLI), and type of home (nursing/residential, statutory/independent). Virtually all residents have LLI and very few belong to ethnic minorities or are employed, so these factors have little discriminatory power. The 1981 survey demonstrated only small correlations between age, sex and dependency. Type of home and type of admission are certainly related to dependency, but are also closely related to supply and so inadmissible as predictors in SSA formulae.



- 2.5 Need amongst supported residents is likely to be judged primarily in terms of dependency. We would not wish to rule out the possibility that dependency levels in communal establishments can now be estimated from their available socio-demographic characteristics. However as a practical approach it is proposed that the level of demand for residential care (and its substitutes) in a local authority under a standard level of service should be estimated *not* in terms of the circumstances of people currently in residential care. Rather it should be estimated on the basis of the number of people living in private households<sup>6</sup> who have those combinations of factors which it can be demonstrated would be associated with an increased probability of admission to residential care. This is best ascertained by examining these factors among a nationally representative sample of people currently being admitted into supported residential care, compared with others who are not. It is generally not possible to determine what these factors were for people who have been admitted some time ago, and even if it were, these people were admitted at a time when admissions policies may have been very different.
- 2.6 An approach which does not look at the needs of those currently in communal establishments might discriminate against two types of local authority.
- Authorities that provide high levels of supported residential care, to the extent that this lowers the number of people living in private households with circumstances that would be predictive of the future need for residential care<sup>7</sup>.
  - Authorities that have people with a need for local authority supported care who come from communal establishments, and who are not represented in private households. This applies particularly to areas that attract in-migrants to private residential and nursing establishments, who subsequently seek local authority support because of spend-down. This is discussed further in subsection 2.15.

In case the above two may cause serious problems to equity, we proposed that the admissions study should be supported by other studies to make additional analysis possible. To predict need among supported residents, the 1981 survey investigated the possibility of an ecological correlation between the level of functional disability in residential homes in an authority, and a need indicator based on people living in private households in the same area derived from readily measurable factors such as age, sex etc. There was some very limited evidence of such a correlation (based on 12 areas), when allowance was made for the supply of residential care in authorities. The areas which form the basis of analysis need not be whole authorities, but could be sub-areas as in the recent NHS resource allocation formula proposals. It would require information on locality of origin to be obtained for all supported residents<sup>8</sup>. The objection to the use of ecological correlations is that they do not constitute direct evidence of the influence or association of a factor with need. Indeed, the correlations are inevitably partly the consequence of supply variations.

The spend-down problem would be investigated during the admissions study. If it is serious, it

---

<sup>6</sup> Including regular sheltered accommodation.

<sup>7</sup> The effect of other agencies which purchase or fund services in residential care and very sheltered housing, is complex. On the one hand they lower the demand for local authority purchased residential care. On the other, they also reduce the apparent level of need in the community. In principle these should balance out, but in practice there is good reason for assuming that they will not do so, and areas with a large supply of such facilities may be relatively advantaged.

<sup>8</sup> This can only be done with an admissions study under the heroic assumption that variation in admission rates between localities is constant through time.

should be possible to estimate some of the demand from this source from in-migration rates to communal establishments (1991 Census).

- 2.7 In some local authorities financial restrictions may result in a lower level of admission than would be expected if there were a standard level of service. As SSAs are not concerned with the absolute level of demand this will only be a matter of concern if this affects estimates of relative need based on area characteristics. If there are restrictions on admissions some form of rationing will be taking place. The form that this takes in practice will need to be established as part of the admissions study in order to allow for such rationing in the data collection and/or the analysis.

## 2.8 Predicting Costs.

The cost of residential care for a new admission, under a standard level of service, may be regarded as coming from:

- The length of stay (we mean here length of stay as a supported resident);
- The type of care that he/she will require, which will depend on the health and dependency of the resident, and may vary through time;
- The person's ability to pay for part or all of their keep (for net unit cost)<sup>9</sup>.

These are discussed further in the subsections below. The cost of residential care will of course also depend on the prices of input factors such as capital and labour, but these are beyond the scope of the present study.

- 2.9 There is an important general point about predicting costs for SSA purposes. It is only useful to investigate reasons for variations in costs between individuals, where those variations will be redistributive between local authorities. There is little point in investigating circumstances such as length of stay or dependency if any of the following are true:

- If there is little variation in average weekly costs, between supported residents in different circumstances.
- If the frequency of occurrence of this circumstance among supported residents would vary little between local authorities under a standard level of service (for example, if most local authorities would have a similar balance between short and long stay admissions under a standard level of service).
- If it is not possible to predict the frequency of occurrence of this circumstance among supported residents of a local authority (for example, number of residents at high levels of dependency), from factors that are relatively easy to measure routinely<sup>10</sup>.

- 2.10 *Length of stay.* Although some people stay many years and have high cost consequences, many

---

<sup>9</sup> Fee levels are, of course, assumed to depend only on the client's circumstances under a standard level of service.

<sup>10</sup> However it would still be important to know about this factor and to consider the possibility of estimating it in future.

others leave very quickly (for example short-term admissions or those in terminal decline) and have low cost consequences over time. Whereas 83% of admissions to LA homes over a year are (planned) short-term, only 9% of people in LA homes at any point in time are short-term admissions<sup>11</sup>.

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<sup>12</sup>, and for this reason a cross-sectional study has much to recommend itself for costs studies. The options are:

- To conduct a follow through longitudinal study based on admission to establish actual costs. There are many advantages in this, but it is costly and cannot be undertaken quickly.
- To undertake a cross-sectional study to identify the main cost-raising factors and correlates such as dependency and age, and weight the admissions study so that it matches the cross-sectional population on these factors. There are however problems with this. There is no guarantee that this would correctly adjust the admissions sample, because age and dependency change. For example, people who are admitted at very high dependency may have very different socio-demographic characteristics from the typical high dependency resident in a cross-sectional study. Actually this is all rather academic since, as has already been noted, (i) the link between age and cost is weak; (ii) it is very difficult to estimate the dependency of residents from their socio-demographic characteristics at admission. The implication is that even if reweighting on the basis of age and dependency is undertaken, the low correlation between the factors which can be measured routinely and dependency while in residential care will mean that such reweighting will have little effect on the derived SSA formulae.
- Weight the admissions sample on the basis of expectations about length of stay. What is really likely to matter is whether the admission is long-term or short term<sup>13</sup>. What evidence there is would appear to suggest that once established long term admissions quite soon converge to a stable pattern that would not be atypical of a cross-sectional sample in its average cost implications. For this purpose short term admissions include those who actually leave quickly, rather than those admitted on a temporary basis.

2.11 The simplest approach to weighting on the basis of length of stay is to exclude from analysis short-stay cases, for example, those who have actually left in under a month. This is the approach we recommend in the first instance. More sophisticated weighting of short/long stays is possible but relies on guesses about current length of stay and is unlikely to make much difference (this can be tested). The admissions study should identify those residents who only remain in the home for a very short period. It will be helpful to stratify the admissions sample by type of admission (long/short stay) to make it more efficient for this purpose. In the longer run a longitudinal study tracking length of stay is virtually essential for more accurate

---

<sup>11</sup> RA/93/2 tables 7 and 10.

<sup>12</sup> If the residential population is stable.

<sup>13</sup> Such evidence of which we are aware (and this is limited) suggests that once a resident has become established, future length of stay becomes unpredictable from their personal circumstances. Note the low correlation between age and length of stay reported in the DH "Survey of age, sex and length of stay" (1988).

estimation, which will be improved within SSA formulae if length of stay proves to be predictable from socio-demographic factors on admission.

- 2.12 *Type of care.* Section 3 discusses in more detail the design requirements of a study for determining the relationship between health, dependency and cost. A cross-sectional study is desirable for this purpose: a longitudinal study may be even better. It is possible as part of the admissions study to investigate the negotiated price of the new resident, and to relate this to socio-demographic circumstances at the time of admission. A cost formula may be estimated on this basis<sup>14</sup>. This would reflect the combined impact of local agreements about dependency criteria and fees and, where such agreements are not in place, average weekly costs which depend more on the type of home to which a person is admitted than to their needs while in that home. If this is so (and this can be tested in a longitudinal study), then subsequent costs will depend mainly on circumstances at the time of admission.
- 2.13 It is important to note that under a standard level of service, there may well be only small variations between areas in dependency profile of people given supported residential care by local authorities, as well as in the socio-demographic characteristics of residents that are indicative of dependency levels. The 1981 Survey analysis found no case for including population characteristics of this sort in the SSA cost formula. Unless there is some evidence from the needs element of the admissions that there might be such variations under a standard level of service, there would be no justification in a more sophisticated investigation. This issue is very close in principle to that of whether to form separate target groups for residential homes and nursing homes, the methodology for which is described in subsection 2.17.
- 2.14 *Ability to pay.* The admissions study can readily be adapted to measure the relationship between assessed charges to the client and readily available wealth indicators for that client including tenure and state benefit receipt for people recently living in private households. However for SSA purposes, there is still a question of how indicators of wealth among elderly people generally in the authority are related to the wealth of people being admitted to supported residential care. If wealth as such does not enter needs judgements, then in principle the relationship should be direct: the proportion of new admissions who would be able to pay would be in direct proportion to the wealth indicator for elderly people in the authority. But it is more likely that wealth does influence whether someone seeks residential care. If so, wealth must also be included as part of the process of estimating need for supported care. It is not easy in this circumstance to estimate directly the effect of wealth indicators on the income from charges. However a practical approach would be to undertake an additional level of modelling at a locality level, correlating evidence about the levels of wealth indicators among elderly people in the localities from which new residents come, with their assessed charges. This would provide a means of adjusting the (net) cost equation to allow for indicators of wealth among elderly people.
- 2.15 There is a separate, but similar problem for people being admitted from other long-stay communal establishments. These may well be people for whom spend-down is a factor. The admissions study will be able to estimate their ability to pay, and how to include "source of admission" in a cost equation, if significant. The implication is that the SSA cost equation might include the supply of independently funded residential and nursing care in an area as a cost raiser.

---

<sup>14</sup> Its long-run applicability depends on the assumption that variations in costs between residents stay in the same ratio as at the time of admission.

2.16 How many target groups?

We have observed that where cost variations occur there is sometimes a case for considering additional target groups. The most important case is likely to be in the type of care provided, and we consider here whether and how residential and nursing home care should be separated.

2.17 It will be desirable to form separate needs groups for supported residential and nursing home care if all the following obtain:

- placement costs are different (this may be taken for granted);
- there are significant variations between areas in the balance between nursing and residential care that would be provided under a standard level of service, because of variations between areas in elderly people's circumstances;
- it is possible to estimate the need for residential and nursing home care separately from factors that are measured routinely for elderly people in the area (which are not supply factors), sufficiently reliably that these estimates reflect variations between areas in needs.

This can be tested using the admissions study provided sufficient admissions are made to each type of home for a separate need equation to be estimated. It will be necessary to have estimates of the average weekly costs in each type of home and ideally to adjust for differences in lengths of stay in the two types of home. Whether separate needs groups should be used in SSA will depend in what difference having the extra target group makes. This has been illustrated in past analyses for SSA.

2.18 Combining target groups.

We have also observed that in the interests of simplicity it is desirable to keep the number of target groups to a minimum. This raises the issue of whether and how residential and non-residential care should be combined. The circumstances under which it would be appropriate to combine groups is equivalent to that for separating them. If any of the three points listed in subsection 2.17 do not obtain, then it is desirable to combine groups.

2.19 It is proposed to test this by investigating the consequences of using a target group that combines a nationally representative sample of people receiving supported care while living in their own home with people receiving supported residential care. Such a group could be formed by combining the admissions sample with elderly people from the 1991 Census, and defining "need for supported care" based on common information from both.

2.20 The question arises of whether these two groups should be weighted in some way, to allow for (i) the different sampling fractions involved (including allowance for one being an entrants sample while the other is a stock sample); (ii) differences in likely cost implications. In principle the latter is not desirable because it results in cost factors being introduced into the needs equation. In any case, it is important to note that if the resulting need formula is greatly sensitive to weights between the two groups, the implication is that separate groups are essential.

2.21 Let us suppose that in practice there is some sensitivity to weighting but it is still considered desirable to combine groups in the interest of simplicity. We would suggest that in this circumstance the weights applied should be chosen on the solely empirical grounds that they are

non-negative and that the resulting SSA distribution (as nearly as we can estimate it) shows maximum correlation with the SSA derived from separated groups.

## 2.22 Summary of information requirements.

The core information requirement is for a study of people who are assessed and admitted to local authority supported residential care, that is nationally representative. The purpose is to compare the socio-demographic characteristics of those who are admitted with the general population of elderly people. This subsection summarises the general needs. Detailed recommendations are contained in section 6.

- 2.23 The sample needs to be large enough to include sufficient long-term admissions, and to include people admitted to both residential and nursing homes. This will imply stratification in the sample design.

The information that is sought from each person includes

- their source of admission;
- their socio-demographic characteristics (while living in the community) using factors which are associated with the need for admission and for which routine counts are available at local authority level, including household and housing characteristics and receipt of benefits;
- dependency (physical/mental functioning) on admission. This should be measured in a way that can be reproduced with the elderly section of the General Household Survey. Note however this is mainly needed for peripheral investigations, and is not central to those SSA analyses we consider most crucial.
- for cost analysis purposes: the type of home, short or long admission (measured by a short follow-up), weekly cost (price) of care, charges to client.

- 2.24 Comparative information is needed on the same set of socio-demographic circumstances for elderly people not admitted to residential care, for the purpose of estimating the numbers of people living in the community who are at risk of needing residential care or its substitutes. This must be available for a sample of individuals: aggregate information is unsuitable. It is not necessary to run a special study for the purpose: we recommend using the sample of elderly people from the 1994 GHS (assuming it can be made available in time).

- 2.25 To allow for differences in length of stay, so as to adjust the admissions study to more nearly represent the cross-section of "people in need" the analysis should (in the short term) be based on long-stay admissions only. This is not very satisfactory. A longitudinal component added to the admissions study for a significant proportion of admissions would enable much improved weighting later on.

- 2.26 Within the requirement that the sample is nationally representative, cost considerations suggest that it should be concentrated in a limited number of local authorities. There must be sufficient local authorities to ensure that enough long-term admissions can be reported in a short period.

- 2.27 A companion study is proposed in order to see whether and how SSA formulae should be adjusted to allow not just for those at risk but those currently in supported residential care. This should be a cross-sectional study designed to estimate the number of people being provided with supported residential care according to the locality in which they last lived: for this

purpose electoral wards may be used. A cross-sectional study of all supported residents of authorities would be most suitable if locality of origin can be established<sup>15</sup>. The method would be similar to that used by the new NHS distribution formula. It could use any likely area correlates of need. This would include all Census measures previously described, also benefits provided to elderly people and mortality rates. To measure access to substitutes (independent sector accommodation) at ward level the NHS analysis could be used, but it should be possible to construct a more up-to-date measure using the DH gazetteer of registered accommodation for elderly people.

- 2.28 Apart from the sub-study described in the previous paragraph, the only area level information required for SSA purposes will be (i) information about the levels of provision and turnover of elderly supported residents in the authority and (ii) counts corresponding to the socio-demographic factors that prove significant as predictors of admission. These will be required at local authority level for exemplifying the method and testing assumptions about the separation or merging of target groups.

---

<sup>15</sup> It would be essential that losses due to "don't know" and migration to other local authorities were very small.

### 3. DEPENDENCY AND COSTS

- 3.1 Information about the dependency characteristics of residents is of interest in its own right for the purposes of comparisons both internationally and over time but the main focus of interest here is in the relationship between dependency and costs. Up-to-date and valid analyses of the relationship between dependency and costs would provide a basic building block of information which could be used for a number of analyses, some of which are specified below. In each case the value of these would be greatly enhanced (and in some cases made possible) by an understanding of the way that the population of residential care is likely to change given information about the characteristics of admissions under the current arrangements and expected changes in dependency state, length of stay and mortality over time.
- 3.2 There are at least three purposes for which information about the relationship between dependency and costs is necessary. First, although it has been argued that this relationship is unlikely to vary regionally in a way that can be reflected in the SSA formulae, when estimating *national costs of provision* there will be an interest in the degree to which the expected rise in unit costs of residential care reflect rises in the cost of providing care that are beyond the control of local authorities. Second, it will allow *cost projections* of expected changes in the residential care population and consideration of different policy options. Third, it provides a vital first step to estimating individual *lifetime costs* of people admitted at different levels of dependency.
- 3.3 The issue of lifetime costs is of particular concern to those concerned with the continuing funding of residential care, both private and public. Those concerned with providing insurance to cover the costs of residential care have an active interest in how long commitments, once made, will last. Moreover, the Audit Commission has recently voiced concern about rising long term commitments of local authorities in the non-local authority sector as a result of short term spending of the special transitional grant (STG)<sup>16</sup>. Most of this spend has been in the field of residential and nursing home care. Once provided the authority is committed to continuing to provide this care until the person dies or leaves the home. Simple straight line projections have been used to consider the implications of spending of the STG in one year on the following year, with some serious consequences for some local authorities. To look any further forward, indeed to make any accurate assessment of the implications over time, there is a clear need for information about lifetime costs after admission to residential care if authorities and others concerned with funding residents are to be able to plan appropriately.
- 3.4 Types of information required.
- Ideally the relationship that needs to be unpicked is the longitudinal relationship between dependency and costs: how home costs change as their resident population changes. In practice, this would take a very long time to establish satisfactorily and the cross-sectional relationship which uses homes with different resident populations and costs is the most practical basis for analysis.
- 3.5 Even on a cross-sectional basis the relationship between costs and dependency is a complex one. It is not possible to deduce much about the relationship unless other causes of variation, such as factor prices, quality of care, sector of provision, use of homes for the provision of short term care and other intermediate outputs such as meals-on-wheels services, are taken into account. The costs of an establishment, in so far as they are related to dependency, reflect the

---

<sup>16</sup> *Taking Stock*, Audit Commission Bulletin, 1994.



dependency of the overall population of the home (including privately funded residents) in the financial year to which the cost data relate. Information is needed for a large sample of homes (at least 100 of any one type) before such relationships can be untangled.

- 3.6 When considering the ways in which to measure dependency it is important to consider both comparability and that the method of measuring dependency should reflect the resource implications of the characteristics of residents. The need for this has been discussed at length elsewhere<sup>17</sup>. Both to maximize comparability and to explore the relationship with costs it is necessary to collect a variety of items that will allow the derivation of a number of different established scales (see Box 2) which can then be tested using the data on costs and charges together with other details about the home.
- 3.7 It was identified above that the relationship between dependency and costs is a basic building block of information that is needed for a variety of purposes. Another basic building block with wider implications than the particular purposes identified here is information about length of stay and how dependency changes over time. Information about these is required to estimate lifetime costs and desirable when making cost projections and estimating national costs of provision beyond the next year.

---

<sup>17</sup> See PSSRU discussion paper 1081

#### **4. OTHER RESIDENTS**

- 4.1 The Department has identified the need to consider residents placed by the NHS and privately funded residents in order to monitor the health dependency and needs of the whole population in communal establishments as well as in private households.
- 4.2 People who are privately funded are also important because, without the need to have a care assessment, they may provide a very different profile of needs on admission. This group may enter care at lower levels of disability and, with the increased levels of income among elderly people are likely to be a growing proportion of the population of residential care. How demand from this sector develops will have a significant effect on the overall residential care population and thus on the average unit cost of care.
- 4.3 If privately financed people do enter homes at lower levels of dependency they could be expected to stay in residential care longer. This has implications for local authorities both in terms of how likely people are to cease to be able to finance themselves and for how long they will need to be funded thereafter.
- 4.4 Type of information required.

In order to clarify what is happening to this population information is required about the type of people being admitted who are financed privately or by the NHS, ideally set in the context of the existing residential care population. Some people who are assessed by local authorities will meet all their charges once admitted to residential care. These could be identified by an admissions study based in local authority SSDs. The majority of privately funded residents are not expected to go through this admissions process, however.

- 4.5 To identify a representative sample of the type of individual who is being admitted to residential care privately it is necessary to record the characteristics and rates of admission to a stratified sample of homes which represent the full range of types of communal establishment. This can then be re-weighted to reflect national provision of each type.
- 4.6 In order to monitor the health dependency and needs of the whole population in communal establishments in a way that is comparable with private households the measures of resident characteristics should, as far as possible, reflect data collected in the GHS.

## 5. APPROPRIATENESS OF PLACEMENTS

5.1 The issue of to what degree elderly people are being placed appropriately when admitted to residential care is important because of the implications both for the elderly people themselves and for the conclusions that may be drawn about the costs of providing care for the population of residential care homes. The SSA formula assumes a 'standard level of service' which in itself implies that people have been placed appropriately. If people are being placed inappropriately then the costs associated with their placements are not good indicators of the costs of care. Clearly it would be useful to investigate this issue in conjunction with a study of admissions for SSA purposes.

5.2 There are two principal aspects to appropriateness of placements: whether the individual should be in residential care at all and whether the type of establishment suits their needs. The arrangements and incentives for admission to residential care have been radically altered by the reforms. The intention is to encourage local authorities only to place people who cannot be cared for in the community in residential care and for those concerned with placements to select the most cost-effective option. But are these incentives working? In a climate of cost restraint it is all too easy for the cost issue to dominate the effectiveness in decision making about placements. From another perspective some placements in more costly nursing homes may be unnecessary when the problem is dementia and they can be cared for better and at lower cost in specialist residential homes.

5.3 Type of information required.

To consider whether people should be in residential care at all information is needed about the characteristics of people entering residential care on a comparative basis to those who are successfully maintained in the community. To consider whether the type of residential care is appropriate information is needed about the characteristics of admissions, the home they are admitted to and the success of the placement.

5.4 It is both impractical and invalid to collect and use information in the proposed survey about those who have been assessed for packages of care in the community to compare with those admitted to residential care. From a practical point of view the workload generated for the local authorities would be huge. There is also the issue of whether the package was in fact successful: there will be occasions on which complex packages simply fail to keep people out of residential care for more than a few months.

5.5 Some exploratory analyses would be possible about the appropriateness of the type of residential care. The admissions study would provide information about the characteristics of new residents. The cross-sectional study about the homes themselves, including quality of care. The longitudinal study would identify information about destination outcomes.

5.6 Although it is unlikely that the type of survey envisaged here could provide definitive information about appropriateness of placements there is clearly potential to explore the issue in conjunction with other studies. For example, information about the characteristics of people who do and do not enter residential care, and the outcomes for both on a comparable basis which is being collected by a PSSRU study evaluating community care in ten local authorities (ECCEP), might provide the basis for some exploratory analysis. Similarly, a longitudinal study which is proposed will be following up the process of admission to a variety of residential care establishments and outcomes after six months (to be led by Peter Huxley). This may also provide useful insights that might be explored further given compatible information about the characteristics of homes and residents. This study includes elderly people with mental health problems so would be particularly useful to draw on when considering the appropriate

placement of people with dementia.

## 6. SURVEY DESIGN

6.1 There would be three inter-related parts to the survey: an *admissions study* of all local authority assessed new admissions to residential care in 20 LAs over 3-4 months; a *longitudinal follow-up* of a sample of new admissions; and a *cross-sectional study* of a sample of homes which would also identify non-local authority admissions to homes. Details of the design of these surveys, and particularly their content, is under discussion, and the following subsections outline our initial recommendations.

### 6.2 Admissions study.

The admissions study would identify elderly people who are going to have a significant financial impact on local authority resources committed to residential care. This includes those people:

- for whom the decision has been made that they are to be admitted to residential care;
- who have been admitted on an emergency basis and need to be at least financially assessed by the local authority;
- who are already in residential care who are being assessed because they no longer have the resources to pay for residential care;
- who are moving from one home to another with important cost implications.

Because of the wider interest in the residential care population this would include people who have been assessed as needing residential care who will be meeting the full costs of care in the first instance.

6.3 There is no intrinsic reason for preferring one specific point in the admissions procedure, as long as it is a point at which all the information necessary can be ascertained. This includes

- socio-demographic and dependency characteristics (probably best supplied by the individual assessing needs)
- financial information about the assessment of individual resident contributions to care costs (probably best supplied by the individual conducting the financial assessment);
- the initial price of care;
- whether the person remains in care for at least a month.

These information needs suggest that a short delay between the actual admission and collating all the necessary information may be useful.

6.4 There is currently great uncertainty about admission rates of new supported residents and this adds a complication to our design proposals. On past assumptions we believe that a study of admissions to 20 local authorities over three months would yield about 2200 new long-term admissions of which 1500 will be to residential care and 700 to nursing homes. There will be many more short-term admissions but they are less important to us and we suggest a one-in-ten sample which should yield at least 500 short term admissions. We are assuming that to get an adequate sample of long-term admissions the data collection period will be between three and four months. Should there be substantial delays in admission, the possibility of including people put on waiting lists as well as those actually admitted will be explored.

6.5 Care would be taken to ensure that emergency admissions that become the financial responsibility of the local authorities are included. Some short stay emergency admissions will

not be easily identifiable. These, and privately financed admissions, are best monitored during a cross-sectional study of homes (see below).

- 6.6 Data would be collected about the characteristics of the person being admitted and the home they are being admitted to (see Box 1). It is important that consistent information is collected across each element of the study. The way that dependency will be approached is described in Box 2.

### **BOX 1 ADMISSIONS STUDY DATA REQUIREMENTS**

#### **INDIVIDUAL**

Type of admission:	emergency, planned short term, other planned.
Where admitted from:	household, hospital, nursing home, etc.
Previous address:	postcodes coded to ward.
Finances:	income group, capital, contribution towards costs of care, receipt of poverty related benefits.
Personal characteristics:	age, gender, ethnic group, limiting longstanding illness.
Dependency:	see Box 2.
Household composition:	number of people in the household, age composition
Accommodation:	house, flat etc, tenure.
Service contact prior to admission:	identify if not known to SSD prior to admission. If known: home help, district nursing, meals-on-wheels, day centre. Length of stay in hospital if admitted from hospital.
Type of care:	nursing or residential bed, respite, rehabilitation, long stay, trial prior to long stay, single/shared room.
Fees:	fees charged by the home for this individual.
Contract:	purchased as part of block contract with this home/organisation or is this a spot purchase?
Informal network:	availability of support in community.
Length of stay and destination:	within one month of admission.

#### **HOME**

Providing sector:	LA, Private, voluntary
Organisation:	name of national/local organisation if relevant.
Area:	Address including post code
Type of home:	Nursing, residential, dual registration.
Specialisms:	EMI, short-stay, ethnic minority.

#### **AREA**

Factor prices:	wage rates, capital prices
SSD provision:	current turnover and throughput of supported residential care by type; similarly for main substitutes including intensive domiciliary care
NHS provision:	numbers of beds x specialty, length of episode x specialty, admission/discharge rates, community nursing contacts
Social care substitutes:	community care service prices, stock of sheltered housing etc
Population characteristics:	Census indicators for elderly plus other SSA indicators such as use of benefits

- 6.8 To summarise this study will provide information about:



Finances:	home, hospital, own home. Dates of changes. have the arrangements changed? (charges increased, fees to individual changed?).
Dependency:	see Box 1.
Care:	changes in purpose (eg from rehabilitation to long-stay); hospital admissions over the period; district nurse input etc.

- 6.10 To summarise this study will provide information about:
- how long people stay in supported residential care;
  - destinal outcomes and mortality;
  - changes in dependency and financial arrangements over time.

6.11 Cross-sectional study

The main focus of this element of the survey is to identify the current population of residential care, the characteristics of the establishment they are living in and the costs of care (in the form of unit costs or charges<sup>18</sup>). This study will also allow some evaluation of the quality of care, ensuring that these costs reflect a standard level of service. In order to establish a representative picture of residential care provision as a whole it would be necessary to ensure that the sample of homes included homes which typified those which local authority funded residents were not admitted to.

- 6.12 Although the main focus of the survey overall is local authority funded residents there is a wider interest in the use of residential care in the mixed economy of care as a whole. It is proposed, therefore, that this cross-sectional element of the study should include assessments of new non-local authority assessed privately funded admissions to the sample homes.

- 6.13 It is proposed that a postal questionnaire is sent to a sample of homes with the objective of identifying 600 homes asking about the current resident population and for homes to record information about emergency and privately financed admissions during the following two or three months. A follow-up interview would establish information about the home and any additional information required about the characteristics of emergency and NHS and privately financed admissions. Details of the information to be collected about homes and residents is in Box 3.

<b><u>BOX 3 CROSS-SECTIONAL STUDY DATA REQUIREMENTS</u></b>	
<b>HOME</b>	
Providing sector:	LA, Private, voluntary.
Organisation:	name of national/local organisation if relevant.
Area:	address including post code
Type of home:	nursing, residential, dual registration,
Specialisms:	EMI, short-stay, other
Contracts:	contractual relationship with LA, if any.

<sup>18</sup> In a survey it is impractical to consider the measurement of costs in great detail, especially in the private sector where information is particularly difficult to obtain. It is proposed, therefore that the analysis for the independent sector should be based on charges which represent the cost to the local authority.



Fees:	average fees, additional charges to residents, discriminatory pricing according to type of individual/admission?
History:	previous use of establishment (eg private household), length of time in operation.
Characteristics:	size, number of single rooms, provision of other services (meals on wheels etc); admissions policy.
Quality of care:	draw on ongoing research for measures. Include staffing levels, turnover of staff, sickness rates, qualifications.
Resident population:	turnover.
<b>INDIVIDUAL RESIDENTS</b>	
Characteristics:	age and gender.
Services received:	day care, district nurse, OT, physio, chiropody.
Dependency:	see Box 2.
Finance:	local authority financed, private means, top-up payments, income support, NHS contract.
Over a three month period	
Privately financed admissions:	see Box 1.

6.14 It was identified above that the real interest is in how costs and dependency are related over time. Ideally, this cross-sectional study should be repeated in the same home in about five years time. This would allow examination of the actual change in the population than had taken place and (allowing for other influences such a changes in function) the comparison of actual and predicted cost differences.

- 6.15 To summarise the cross-sectional study will provide information about:
- the characteristics of the resident population currently in residential care;
  - the characteristics of homes, including some assessment of quality of care;
  - the characteristics of short stay emergency, NHS and private funded admissions to homes;

The proposed timetable for these surveys is as follows:

	<u>In field</u>	<u>Reporting</u>
Admissions study	Sept. 95 - Dec 95	May 96
Longitudinal study	April 96 - June 96	Dec 96
Cross-sectional study	Febr. 96 - April 96	Dec 96

6.16 Linked studies.

There are a number of ongoing studies which are being conducted by, or are already linked to PSSRU which would provide valuable possibilities to enrich and extend the analyses of the proposed survey. These include:

- an ongoing study of quality of life in residential care (led by Anthony Mann);
- a proposed longitudinal study of quality of life in residential care (led by Peter Huxley);
- an evaluation of community care of elderly people (ECCEP, led by Bleddyn Davies)

- the current programme of mixed economy of care (MEOC, led by Martin Knapp);
- validation and development of Resource Utilisation Groups (RUGS, led by Iain Carpenter).

## 7. CONCLUSION

7.1 The argument has been made before about the extent of need to investigate residential care, and the loss of valuable information when a series of unrelated studies explore related issues with different instrumentation<sup>19</sup>. The Department of Health has acknowledged a variety of requirements some of which cover a considerable number of possible issues that could profitably be investigated. We consider that the potential exists in this set of studies to cover a wide variety of policy and practice needs, not all of which it will be possible to identify in detail at this stage.

7.2 At the time of writing a survey of admissions and the first wave of the longitudinal follow-up that have been commissioned. Outline approval has been given for the cross-sectional survey of homes. The table below identifies which studies feed in to which interests.

Analyses and areas of information of interest	Admissions study	Longitudinal study	Cross-sectional study
SSA formulae	XX	X	X
Dependency and costs	X		XX
Changes in dependency over time		XX	
Non-SSD funded residents			XX
National costs of provision	X	X	XX
Life-time costs	X	XX	X
Predicting costs	X	XX	X
Appropriateness of placements	XX		X

XX: essential for analysis or description

X: supporting evidence

7.4 Local authorities have a vested interest in a more equitable distribution of public funding which reflects local circumstances. In addition to the contribution that this survey should make to that process the local authorities involved in the admissions study will be provided with a picture of:

- rate of admissions and the sources of these admissions
- characteristics of admissions (for example, dependency levels);
- type of home to which people are admitted (for example, nursing and specialist);
- average net and gross cost of these placements to the authority;

and at a later date:

- the length of stay and changes over time in these placements.

7.5 It is hard to over-emphasise the value of a three part linked survey that will allow a wide variety of analyses and provide a benchmark from which future changes in the role and characteristics of residential care can be measured. The proposed methodology should allow a wide variety of comparisons to be made, over time, cross-sectorally and cross-nationally.

<sup>19</sup> See PSSRU Discussion Papers 1081 and 1082.