

Review of Methodology for the National Adult Social Care User Experience Survey

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Centre for Health and Social Care
by the ONS Methodology Advisory Service

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1 Introduction

Review of The Adult Social Care Survey 2010 Quality Improvement Fund 2010 Project conducted Oct – Nov 2010

The Quality Improvement Fund has been set up by the UK Statistics Authority It provides a set amount of funding each year to conduct work to improve the quality of official statistics.

The NHS Information Centre (IC) were successful in their bid for funding from the Quality Improvement Fund 2010 and have engaged the Methodology Consultancy Service (MCS)¹ to review aspects of the Adult Social Care Survey (ASCS).

This work addresses two² main areas of the survey process:

1. Data collection methodology
2. The sample design (esp. stratification and weighting consideration)

1.1 Background

The new agenda for adult social care places the emphasis upon delivering improved outcomes for people through personalised services. Evidence of progress towards this agenda needs to be based on the effect services have had on those that use them rather than on the services themselves.

All Councils with Adult Social Services Responsibilities (CASSRs)³ have, since 2001, been required to conduct annual user experience surveys (UES) (Department of Health 1998). These surveys have tended to focus on a single client group or service type and have not consequently covered the whole range of social care services as a whole.

To address this issue, the Department of Health has commissioned the Personal Social Services Research Unit (PSSRU) at the University of Kent to work with the NHS IC to help devise the new Adult Social Care Survey which is to undergo its first fieldwork in January to March 2011⁴. The ASCS aims to survey users of social care across the whole spectrum of service and client type and to provide information on the outcomes of social care.

¹ Based within the Office for National Statistics

² Following on from the work on the feasibility of stratifying the sample it was felt to be necessary to consider weighting processes – a feature commonly associated with sample design. The extra work conducted on weighting meant that a third topic for review - further analysis of data could not be conducted within this QIF project. This topic had already been highlighted as being of a lesser priority than either data collection modes or stratification.

³ 152 Local Authorities in total

⁴ The first Survey will run for 2010-2011 using a date for receipt of social care as at 30 September 2010

A pilot of the ASCS has already been conducted in 2010 with favourable results. Many logistical issues have been addressed although a number still remain. Key for the ASCS is that service users with Learning Disabilities and those in Residential Care are to be included. Residential Care is a new group which has not been included in the social care surveys in the past, and while those with a Learning Disability have been included, there has been no specific targeting of this group in the past and they have just received the standard questionnaire which is sent to all service users. As these aspects of the survey are new for 2010/11, there is concern around the ability to generate good response rates.

1.2 Recommendations

The MCS has reviewed the literature available on the development of the ASCS and has conducted interviews with three councils, Department of Health and the Care Quality Commission. Learning points from CLG's Place survey⁵ have been incorporated.

The following recommendations are made to improve the quality of the estimates. We are aware that there will be resource constraints both within NHS IC and in councils which will bear on the ability to undertake any recommendation.

Data Collection Methodology

1. Encourage councils to maximise use of interviews, proactively, particularly face-to-face for users with learning disabilities, given councils' constraints (3.7; 4.2).
2. Formalise the use of a mixed mode design combining concurrent and sequential mixed mode data collection (4.2).
3. Add a bullet point in the Guidance regarding assessment of suitable data collection mode and/or questionnaire format for each sampled person, at the same time as their capacity to consent to take part (3.1; 3.6).
4. Actively contact users with learning disabilities to check whether someone can assist with self-completion and to offer an interview otherwise (3.6).
5. Brief interviewers on the degree of flexibility allowed in rephrasing or explaining questions, and provide alternative simple question wording (3.13.3; 4.2)
6. All councils to use two reminders in all necessary cases (3.11).
7. Include reference to the availability of translated versions in cover letters (3.4).
8. Include reference to the availability of alternative formats for sensory impairments in cover letters (3.5).
9. In the letter to care home managers, mention that numbers in each care home are too small to be robust, to allay fears of consequences and likelihood of inflated results (3.7).
10. Redesign questionnaires to look more appealing (3.13.1; 5.1.1).
11. Remove the requirement for people agreeing to further research to provide name and contact details; instead to link using unique serial number (3.9.1).

⁵ Another England wide survey where fieldwork was conducted within councils – with centralised processing/weighting

Sample design

1. If a better overall estimate is required at council level and no increase in sample size is desired (over the current) then a proportionate stratified design is preferable over a disproportionate design.
2. Aside from any decision to change the sampling design with regards to stratification, England level estimates should be weighted to adjust for the different sampling rates in councils.
3. NHS IC to conduct analysis of the 2010-2011 ASCS for non-response rates across client groups, age, sex and ethnicity as standard. This should be extended into an assessment of the possible bias in overall results if non-response weighting is not to be applied.

2 Review of data collection methodology - introduction

Broadly we agree with the methodology employed on the Adult Social Care Survey. In general the survey Guidance Document distributed to CASSRs is comprehensive, well set out and easy to understand. It reflects the extensive development and piloting work conducted by Social Services User Survey Group (SSUSG)⁶ and in particular PSSRU. The many methodological and practical matters pertaining to surveying this particular population and the local government context have been considered and well reasoned decisions have been taken regarding difficult issues. There are some areas where changes can be made and alternative approaches considered, but these are not major revisions.

There is some scope for restructuring and editing the Guidance Document, to minimise duplicated or overlapping content and to consolidate coverage of particular topics where it is dispersed. Some suggestions for doing so are made later in this review.

Our thoughts on the data collection methodology as set out in the Guidance Document follow. Where proposals or suggested changes are made, we acknowledge that it is unlikely they can be implemented for the 2011 survey for which authorities are currently preparing. We reference the section and paragraph numbers in the Guidance Document.

2.1 Summary of recommendations and suggestions regarding data collection

In this section we summarise the recommendations and suggestions made throughout the subsequent sections on data collection. We have followed a different approach to the sampling section, where recommendations are highlighted at the point they are made. This is because comments on related data collection topics are dispersed due to the structure of the data collection section: comments on the guidance document in its order of content; discussion of mode related issues; followed by comments on field documents.

Each recommendation or suggestion is followed by a reference to the heading number(s) of the report in which further detail or discussion of associated issues is provided.

2.1.1 Efforts to maximise response, enhance data quality and reduce non-response bias:

Recommendations

12. Encourage councils to maximise use of interviews, proactively, particularly face-to-face for users with learning disabilities, given councils' constraints (3.7; 4.2).
13. Formalise the use of a mixed mode design combining concurrent and sequential mixed mode data collection (4.2).

⁶ SSUSG is responsible for designing the surveys and includes representatives from the NHS IC (including the chair and secretariat), DH, CQC, PSSRU and around 8-10 council reps.

14. Add a bullet point in the Guidance regarding assessment of suitable mode and/or questionnaire format for each sampled person, at the same time as their capacity to consent to take part (3.1; 3.6).
15. Actively contact users with learning disabilities to check whether someone can assist with self-completion and to offer an interview otherwise (3.6).
16. Brief interviewers on the degree of flexibility allowed in rephrasing or explaining questions, and provide alternative simple question wording (3.13.3; 4.2)
17. All councils to use two reminders in all necessary cases (3.11).
18. Include reference to the availability of translated versions in cover letters (3.4).
19. Include reference to the availability of alternative formats for sensory impairments in cover letters (3.5).
20. In the letter to care home managers, mention that numbers in each care home are too small to be robust, to allay fears of consequences and likelihood of inflated results (3.7).
21. Redesign questionnaires to look more appealing (3.13.1; 5.1.1).

Suggestions:

1. Use a multiple contact approach, varying the form and appeal of content (3.1.1).
2. Use face-to-face over telephone interviews for older users who are often hard of hearing (3.5).
3. NHS-IC to provide model alternative formats for sensory impairments centrally (3.5).
4. Encourage councils to conduct interviews with care home residents where the resident has no one to assist them other than care home staff (3.7).
5. Consider in the medium to long term whether to develop the questions for use in mixed mode surveys, guided by literature on mixed mode question design, adapting for properties of modes as necessary (4.3).
6. Do not use internet data collection on the ASCS, for a number of reasons (4.4).
7. Use paradata on the characteristics of early, late and non responders, the effectiveness on reminders, and the mode required to obtain response for different user groups, to develop future data collection strategy and weighting for non-response (3.11).
8. Encourage councils to use headed paper for letters (3.12).
9. Change the heading of 'Tailoring the design of questionnaires' (3.13.1).
10. Analyse the effectiveness of incentives where used, e.g. on users with different characteristics, to inform future strategy (3.13.4).
11. Refer in guidance to greater effectiveness of prepaid unconditional incentives than those conditional on completion (3.13.4).

2.1.2 Sample guidance and assessing capacity to consent to take part:

Suggestions:

1. Remove people no longer receiving services/moved away (3.2).
2. Augment the Guidance relating to assessing capacity to consent to take part (3.8).
3. Clarify the Guidance regarding the need to talking to the user when assessing capacity to consent (3.8).
4. Ensure the Guidance criteria are known to all staff involved in the survey and others involved in assessing capacity to consent (3.8).
5. Develop a common method for flagging people who (may) lack capacity to consent, on council databases (3.8).

2.1.3 Timetable

Suggestions:

1. Clarify the timetable in section 6, to make consistent with the model at section 27. (3.2; 3.10).
2. Consider the optimal timing of the survey within the year (3.2).
3. Send reminders one week earlier than model timetable (3.10).
4. Specify why the date of receipt of questionnaires is required in the data submission (3.10).

2.1.4 Consent to interview

Suggestion:

1. Build the process of obtaining consent to interview into interview scripts (3.3; 5.2.1).

2.1.5 Confidentiality

Recommendation:

1. Remove the requirement for people agreeing to further research to provide name and contact details/link using unique serial number (3.9.1).

Suggestions:

1. Develop a protocol for the retention and destruction of survey records (3.9).
2. Consider less burdensome methods for unique labelling of each questionnaire (3.9).

2.1.6 Revisions to the Guidance document

Suggestions:

1. Move forward the summary of steps relating to assessing appropriate mode and/or questionnaire format (3.13.5).
2. Consolidate various sections/paragraphs to bring together content on related topics and reduce repetition (3.14; 3.16; 3.18).
3. Provide guidance for dealing with conflict of interest between councils/NHS-IC regarding use of a sexual identity question (3.15)
4. If required, draw councils' attention to ONS's recommended sexual identity questions (3.15).

2.1.7 Comments on field documents (letters, questionnaires, interview scripts)

Suggestion:

1. Various changes to the cover and reminder letters, consent form, questionnaires and interview scripts are suggested, for NHS-IC to consider (5).

3 Review of the Guidance Document

3.1 Guidance Document Section 5: A brief outline of the survey process

This is a useful section. Reflecting some of the comments made in the remainder of this report regarding the greater use of interviews and proactive promotion of alternative formats, we recommend the addition of a bullet point after 'Removing those who are ineligible...', regarding assessment of the appropriate mode of data collection for each user, based on council records and/or the views of staff/care home managers (See later comments about sections 10, 11, 12, 26, 27, 28, 32).

3.1.1 Using multiple contacts

Rather than initially sending the questionnaire with cover letter then sending reminder letters also with a copy of the questionnaire, consideration could be given to advising councils to use the multiple contact approach advocated by Dillman et al (2009) in *Internet, Mail and Mixed-Mode Surveys: The Tailored Design Method*. They say it is "essential for maximising response to mail surveys". Use of different stimuli at each stage is more effective than repeating content. An example system includes: a brief prenotification letter, sent a few days prior to the questionnaire; the questionnaire mailing, with cover letter; a postcard sent to the whole sample doubling as a thank you and a reminder; a reminder letter with replacement questionnaire; and possibly a final contact via a different mode of delivery (e.g. telephone or special delivery). The intention is that each contact is different, in appeal, length, format, content or delivery, and conveys renewal of effort on the part of the surveying organisation.

Clearly such a model system would need to be adapted to account for service users being contacted and/or interviewed by a different mode, either at the initial stage or reminder stage (as advocated later in this review).

There are, of course cost considerations which mean councils may not be able to introduce further steps: the addition of prenotification and postcard stages would have associated printing and postage costs, and may require additional staff time. Some of this cost may be offset by reduced need to send a replacement questionnaire, though it is not possible to assess the extent to which the postcard would gain further responses and remove to an extent the need to print and post the first reminder with questionnaire. There is also the possibility that for the ASCS survey population, the full multiple contact approach may be less appropriate. However, the Guidance could at least draw councils' attention to the multiple contact model.

3.2 Section 6: When will this survey take place?

Paragraph 6.1 refers to the eligible population being service users in receipt of services on 30 September 2010. Guidance section 21 describes the criteria to use to remove certain service users, without referring to people who by the time of the survey fieldwork have stopped receiving services for other reasons such as an improvement in their circumstances or who have moved out of this CASSR's area. Removal of such people from the sample could be specified in section 21.

Paragraph 6.1 refers to questionnaires being sent out by 11 March 2011, which does not correspond with the suggested timetable at section 27 (Table 3), where initial mailings are completed by week commencing 21 February and the final issue of

reminders to be sent by week commencing 4 April. We suggest clarifying 6.1 to reflect the longer timescale, for example “The fieldwork should be conducted between 17th January (initial mailing of questionnaires) and mid-April (shortly after the final issue of reminders). Refer to section 27 for a suggested timetable.”

Clearly the survey must be conducted by all authorities in a specified and finite period in any given year. But has consideration been given to the possibility of bias in responses due to its timing? For example, do users require more services (types or intensity) at different times of year? If so, might this result in more or less favourable views to be expressed, due to the degree of salience of services to respondents or the appreciation they feel for them? Is there a time of year when such effects might be reduced?

3.3 Section 9: How are the data to be collected?

Paragraph 9.3 ‘demotes’ the possibility of users with learning disability being interviewed face-to-face to a footnote, where this would seem to be a desirable mode for them, on the basis of PSSRU’s work (see comments at 3.6).

Paragraph 9.7 refers to provision of ‘time to think’ in order to give informed consent in interviews; ensuring that interviewers allow sufficient time is not built into the interview script, so a suggested revision is made (see also 5.2.1 on interview scripts).

3.4 Section 10: Service Users whose first language is not English

The model cover letters make no reference to the availability of translated questionnaires. To help improve response rates from ethnic minority groups, it is recommended that a sentence be included that translated versions are available on request. As well as information on how to make a telephone request for a copy to be posted to them, consideration could be given to providing a web link from where respondents can download and print translations – for example to a dedicated page on NHS-IC’s website (not the guidance page where they are made available to councils) - for all councils to include in their letters. However, if councils have added their own questions, they may need to make alternative arrangements or omit this option. Additionally, a one-page insert could be provided in all mailings, with brief information about the survey and availability of translations in each of the thirteen languages provided.

3.5 Section 11: Alternative formats for sensory impairments

As with translated versions, the model cover letters make no reference to the availability of questionnaires in alternative formats. We recommend that one be added in an effort to facilitate response from all types of user.

It would benefit councils if the alternative formats in paragraph 11.1 (excluding signers and interpreters) were available as a central resource to download from or order via the NHS-IC website. It would provide consistency, reduce burden on councils and be more efficient for the survey as a whole (though there would be a cost to NHS-IC). Is this a possibility? However, if councils have added their own questions, they may need to make alternative arrangements – such as editing the central resource - or omit this option.

At paragraph 11.3 it could be suggested that staff and others involved in assessing eligibility for the survey and capacity to consent to take part (as covered at sections 8 and 21) are at the same time asked for their assessment of the appropriate questionnaire format or survey data collection mode for the individual. Ensuring that the right questionnaires go to the right client types was described as “*a bit of a headache*” among the councils consulted, to be done with care in conjunction with social workers and care home managers.

For those users requiring an interview, face-to-face may be necessary to make the survey accessible. During the consultation with councils it was said that older people may be hard of hearing and therefore a telephone interview be impractical. However, councils may vary in their ability to conduct face-to-face interviews.

3.6 Section 12: Service Users with a Learning Disability

The PSSRU report on its developmental studies for the survey (Malley et al 2010) noted that people with learning disabilities “*will need to be encouraged to seek help to answer the questionnaire*” due to difficulties in reading, understanding and formulating responses, without which high rates of non-response are likely.

In addition to the provision of easy read versions of the questionnaire, it is recommended that councils be encouraged to provide face to face interviews wherever possible, to maximise response, enhance the quality of data and “*prevent the person helping the service user to present their own views...*” Whilst the letter mentions the possibility of a relative or friend assisting and that users with learning disabilities can request an interview, a more proactive approach would be desirable from a methodological perspective. Among the councils consulted reservations were expressed that responses from people with learning disabilities were affected by help having been provided: answers were more favourable. It is unclear whether this is due to the assistant influencing the answers overtly, or to the user giving socially desirable responses (see 4.1 on mode effects). There was a view that it was important to use interviews whenever possible to help those with communication needs. However we acknowledge that councils will vary in their capacity and resources to conduct a substantial proportion of interviews.

If councils are unable to provide an interviewer for every sampled person with a learning disability, at least they could be encouraged to contact sampled persons to ask if they have someone who can assist them, and offer an interview to those who do not, rather than passively waiting for the user to request help. At the non-response reminder points, again a more proactive approach can be taken, rather than just posting another copy of the questionnaire.

3.7 Section 13: Additional steps for those in residential care

Paragraph 13.2 states that the letter to care home managers explains that the number of residents selected in each home will be too small to deliver robust results at that level. This point may well lessen managers’ concerns; however the model letter (Appendix F-5) does not mention this point, so we recommend its addition.

There was some concern expressed among the councils consulted that care home managers or staff assisting or answering by proxy would provide more favourable responses than would users, leading to “*inflated [...] positive results*”. Reservations about the use of postal mode with care home residents were expressed, with face to

face interviews seen as the desirable alternative. Councils should be encouraged to conduct interviews with care home residents where the resident has no one to assist them other than care home staff. However the issue of lack of resources to conduct interviews was also raised. Councils may wish to assess the likelihood of staff influencing responses based on their knowledge of each care home, and of the requirement for staff to personalise questions for the selected respondent, and make decisions accordingly.

3.8 Section 21: Removing ineligible cases including those who lack capacity to consent

The Guidance on this matter is clear and the provision of the criteria to be used to ensure that service users understand the survey is helpful. In order that the process is conducted properly by those asked to make the assessments, the guidance could be augmented further by principles set out in the Mental Capacity Act⁷ such as:

- A person must be assumed to have capacity unless it is established that he lacks capacity.
- A person is not to be treated as unable to make a decision unless all practicable steps to help him to do so have been taken without success.
- A lack of capacity cannot be established merely by reference to –
 - A person's age or appearance, or
 - A condition of his, or an aspect of his behaviour, which might lead others to make unjustified assumptions about his capacity

There may be a spectrum running from those clearly lacking capacity to those for whom it is more marginal. It is somewhat unclear whether the person making the judgement is required to discuss the criteria with the sampled service user (as implied in the wording of the criteria at paragraph 21.1) or if they can make the assessment on the basis of their knowledge without directly consulting the sampled service user (as implied in the bullet points at paragraph 21.2). Should the guidance be amended to make this clearer?

Anyone who may speak to a sampled service user or their relative/advocate, for example responding to a telephone query, should be made aware of the criteria in order that they know to ask appropriate questions and provide appropriate advice.

Paragraph 21.8 recommends flagging those removed due to lack of capacity to consent on databases. This is a sensible proposal to make future surveys more efficient. However the LAs consulted had mixed views; support was expressed but it was also thought to be inappropriate since an individual's capacity might depend on the particular survey or vary over time. If possible a common method could be developed from consultation with councils regarding their existing processes and experience in the current survey round, and provided to councils. It could include, for example, the criteria and process to follow, different categories to be included in a database flag (for example 1. Permanently lacks capacity; 2. Capacity should be considered on case-by-case basis; 3. etc...).

⁷ <http://www.legislation.gov.uk/ukpga/2005/9/contents>

3.9 Sections 24 and 25: Confidentiality and anonymity

At paragraph 24.2, a protocol for the length of time completed forms, and other documents containing personal information (e.g. sample documents, correspondence) should be retained and how they should be destroyed (e.g. shredded and disposed as confidential waste) would be worth adding. This should be after publication of any reports referring to the data, allowing time for the content to be accepted, and take into consideration the use of data in informing action by the council or others which might require individual level data.

Paragraph 24.3 advises putting a unique respondent code on each page of the questionnaire, other than using a sticker. While the reasoning is justified, this would be a time consuming process for councils to apply manually to each questionnaire. Are there any methods for doing this efficiently which could be suggested to councils (such as mail merge)?

3.9.1 'Further research' question

The issues of confidentiality and anonymity have been comprehensively covered in the guidance and field documents. However, there is a design feature which compromises their application: the questionnaires conclude with a question about willingness to take part in further research (Q25) and ask those willing to provide their name and contact details. There may be respondents who will not want to provide this information along with their answers. Even if the response rate is not affected by this, the rate of agreement to further research may be lowered.

Since each questionnaire is to contain a unique code, which can be matched back to sample information and user databases, the requirement for name and contact details would seem superfluous. It is recommended that the space for provision of contact details be removed, and instead the unique code matched to the sample file/database instead.

If additional information not held centrally is desired (this may include the telephone numbers and email addresses requested at Q25), it is recommended respondents be asked to record them on a separate sheet for return in a separate envelope. Of course this adds to the logistical task, survey costs and respondent burden, so may not be feasible.

3.10 Section 26-27: Managing the sample, despatch and return of questionnaires

There is some contradiction between paragraphs 27.1, which sensibly recommends completion of fieldwork by Census day, 27 March, and 27.2, which suggests a timetable where fieldwork extends into April. Table 3 could be amended such that the week 1 questionnaires are shown being sent out during the w/c 17 January (consistent with 27.1), rather than w/c 31 January, and all other dates brought forward accordingly (although a later start may be more feasible given that councils are likely still to be checking the sample and removing ineligible users after the new year).

Furthermore, it seems unlikely that someone who has not responded after 3-4 weeks will do so after 4-5 weeks. Therefore councils could shorten the fieldwork period by sending the first and second reminders a week earlier than in the timetable; i.e. first

reminders are sent one week after the initial return date, rather than two weeks after. In these ways the bulk of fieldwork would be completed by Census day.

Paragraph 27.4 requires returned questionnaires to be date stamped and the date included in the data return as a key item. The reason for this being a key data item is not specified in the guidance: councils should be informed of it. Without knowing a date of initial despatch, it is unclear what use is to be made in respect of how long respondents take to respond.

The suggestion to use a multiple contact approach, made at 3.1.1 above, would need to be reflected in this section.

3.11 Section 28: Following up non-respondents

This section states that second reminders are not a requirement, if a “*sufficiently high response rate*” has already been achieved. This relates to the achieved margin of error specified in section 15. However, it does not account for non-response bias. We recommend that in order to minimise non-response bias, all councils are required to send a second reminder to all non-respondents to the first reminder. This may obtain responses from groups who have different characteristics compared with respondents who returned their forms after the initial mailing or first reminder. It will also ensure more consistency between councils. If this recommendation were to be followed up, the data return councils fill in should have a field added asking whether responses were received after initial mailing, first reminder or second reminder. Paragraph 29.1 already refers to this as being information essential to monitoring fieldwork, so it should be readily available.

Use can be made of such survey ‘paradata’ (data about the data collection process) relating to the need for reminders; for example the data collected could be analysed to see which types of respondent are earlier responders, and later responders, in respect of demographic characteristics and responses to the questions on service use and quality of life. Later respondents may have more in common with non-responders than with early responders. Such information could be used to inform the need for/benefits of second reminders and targeting of non-response measures in future years. Councils concerned about available resources for second reminders may need to balance the costs of sending second reminders in all required instances against the additional time to assess individual cases to see whether they come into a category where effort to gain response would be beneficial to data quality.

As discussed above with regard to section 12, a proactive approach to obtaining response from users with learning disabilities or who otherwise have difficulty in responding to the postal questionnaire might be taken. Information on the use of alternative approaches to individuals, such as when a switch between modes took place and whether it was effective, could also be collected for use in developing future strategies.

Weighting could be developed and applied to increase/decrease the impact of a respondent based on whether they have characteristics associated with lower or higher response rates; however this may be too complex for councils or NHS-IC in addition to population weighting. The example of the Place Survey weighting scheme⁸, which uses demographic information alongside population estimates, could

⁸ Set out in the technical annex of the survey’s manual at <http://www.communities.gov.uk/publications/localgovernment/placesurveymanual0809>

be used to inform a scheme for ASCS. It may result in high weights being applied to individuals in small response groups. The Place Survey Statistical Review⁹ aimed to balance the benefits of more representative data with the increased uncertainty when using high weights, by capping weights at 5. This had an impact on LA level results but made little difference nationally.

The suggestion to use a multiple contact approach, made at 3.1.1 above, would need to be reflected in this section.

3.12 Section 31: How to get the questionnaire to service users

Some comments on the content of the cover letters are given later at 5.3. Paragraph 31.3 suggests the addition of corporate logos; this could be further emphasised by recommending that official council headed paper be used for all letters, to convey the importance and legitimacy of the survey.

Paragraph 31.2 refers to the consent form to be signed before an interview begins. It should be specified that this is for face to face interviews. See 5.2.1 for discussion of informed consent procedures in face to face and telephone interviews.

3.13 Section 32: Maximising response

The suggestion to use a multiple contact approach, made at 3.1.1 above, would need to be reflected in this section.

3.13.1 'Tailoring the design of the questionnaires'

Paragraph 32.3 sets out some ideas for boosting response. The first heading beneath this is 'Tailoring the design of the questionnaires' but the points are essentially advising councils *against* changing the design. The content of these bullet points is sound, but the section could instead be headed 'Rationale for the design of questionnaires and other documents'. The introductory sentence to paragraph 32.3 would be better expressed as 'Things which have been done to make the survey attractive to respondents or which councils can do to boost response', or similar.

The model questionnaires are quite plain and do not have the look of a professionally designed survey; it is recommended that they be made more appealing, using a document design package if possible. Detailed comments on the content and format of questionnaires and other field documents are given at 5.

3.13.2 'Mailing out and returning questionnaires'

Under this heading the first bullet point actually covers two points (regarding the outward and return envelopes) and could be split.

3.13.3 'Maximising response from frail and disabled users'

Under this heading there is discussion of use of trained interviewers or other staff for conducting interviews, and the briefing they require. As stated, it is important that

⁹ <http://www.communities.gov.uk/publications/localgovernment/statisticalreviewplacesurvey>

interviewers do not deviate from the question wording. However, it is recommended that they be advised what, if any, flexibility they have in respect of explaining the intended meaning of questions or response categories and/or rephrasing questions if not understood at the initial asking. This seems likely to be required given the survey population. Consideration should be given to providing interviewers with simplified question wording to use, based on the version for users with learning disabilities. This would balance the need for consistency of question administration and better data quality through enhanced respondent comprehension.

The model questionnaires for use in telephone and face to face interviews have not been adapted for the change in mode. For example, some questions are difficult to read aloud (during the consultations with councils it was described as “awkward”). Some comments on this are provided at 5.2.2. A general discussion of survey modes is included at 4.

Comments made during our consultation supported the reservations regarding use of advocates only if they know the service user well. Furthermore, their use was reported to be expensive.

The bullet point beginning ‘Inevitably some of the service users...’ contains a *non sequitur*. It begins by saying some users will be unable to respond even to face-to-face interviews, then suggests people not capable of self-completing may be able to respond to an interview. The paragraph should be amended accordingly, perhaps reversing the points made.

3.13.4 ‘Incentives’

Regarding incentives, while NHS-IC analysis has shown that overall response rates have not been improved by incentives (and other evidence supports this), and while agreeing that other methods of encouraging response should be used, any analysis that has been made of the effects on different types of respondents, particularly those from groups less likely to respond, could be provided to inform councils’ strategies. For example, the finding that incentives may increase response among ethnic minority groups may be of interest to councils with higher proportions of ethnic minority service users. Simmons and Wilmot’s (2004) literature review on survey incentives indicates that incentives have been shown to improve response among lower income and education groups and ethnic minority groups, among others. Was any analysis done of the effect of incentives on different types of service user (e.g. in the community or residential care; with and without learning disabilities)? Such analysis might be useful and inform future strategy for obtaining better representation and reducing bias. However, the use of differential incentives (for example, using them only for certain subgroups or non-responders to initial mailing) is not recommended due to ethical considerations of fairness, unless there is compelling evidence for their benefit with regard to data quality.

The Guidance could mention that, when councils decide that use of incentives would be beneficial, evidence suggests that prepaid, unconditional incentives are more effective than those conditional on completion (Wilmot and Simmons), even if of lower value. The intention is to “*invoke a social exchange rather than a financial exchange*” (Dillman et al, 2009). A low value gift voucher for a high street retailer could be enclosed with the initial mailing. Even a book of postage stamps enclosed may help make the survey stand out to respondents, and would be relatively cheap. However the balance between cost and data quality is one for councils to assess.

3.13.5 Paragraph 32.4: information required to maximise access to the survey

Paragraph 32.4 is a useful summary of the steps to take in deciding on appropriate modes/formats of contact and data collection and maximising response from people with issues of access to or ability to complete the standard postal survey, and might be better placed early in the Guidance to highlight it (for example, see comments at 3.1).

3.14 Section 35: The model questionnaires

To put content on the same topic together, paragraph 35.7 should be moved up to follow 35.5 (both relate to additional questions) which will also result in 35.6 and 35.8, which both cover questionnaire length, being together.

3.15 Section 36: Demographic Data

Regarding sexual identity, in paragraph 36.3, among the councils consulted it was said that while the Guidance states a question must not be asked if this information is unavailable from council records (and it was thought unlikely that many councils would hold this item of information), within the local authority there was a general requirement to collect it, creating a conflict of interests for the survey manager. However, there are issues surrounding administration of a sexual identity question in the ASCS context, which lead to the conclusion that the advice in the Guidance is correct. The Guidance could acknowledge such conflicts of interest, for example by advising councils to discuss the issue with NHS-IC, or providing further explanation as to why it is inappropriate to ask.

ONS has developed a sexual identity question for its social surveys, but the emphasis is on face-to-face and telephone modes. A recommended question for use in self-completion modes is available¹⁰, which could be drawn to councils' attention. It must be noted that no testing in self-completion mode, for example of the impact on response rates, was conducted. In self completion modes a 'prefer not to say' category is recommended, unlike in interviewer-administered modes where a refusal can be recorded in the same way as for any question. This is likely to increase the proportion of missing data. Although the effect on the distributions across the substantive categories is uncertain, evidence from other surveys suggests, tentatively, that the heterosexual/straight category is more affected than lesbian, gay and bisexual categories.

In interviewer administered modes procedures are recommended to maintain the respondent's privacy with respect to other people being present, although the interviewer would be aware of the answer. These methods are not really appropriate for this context where the interviewer, or a person assisting the respondent with self-completion, is likely to be a relative/friend or staff member and thus well known to the respondent, which might affect their willingness to answer the question or the answer given.

¹⁰ See the 'Guidance' link at <http://www.ons.gov.uk/about-statistics/measuring-equality/equality/sexual-identity-project/index.html>

3.16 Section 37: Further Research

This section could be moved up to follow 35. This would also result in related sections 36, Demographic Data, and 38, Additional Data Needed Centrally, coming together.

See also the previous comments at 3.9.1.

3.17 Section 38: Additional Data Needed Centrally:

There were mixed views among the councils consulted about the ease or difficulty of providing information on the costs of social care packages. It was considered not to be a problem, and also to be difficult because while the overall budget was recorded on the council system, it was not yet able to provide the breakdown required for the NHS-IC data return.

3.18 Consolidation of content to reduce duplication and overlap

Some sections which could be consolidated follow.

1. Sections 10, 11 and 32 ('Maximising response from frail and disabled users' and paragraph 32.4) could be merged to bring together content relating to the various alternative methods of administering the service (translations/interpreters; formats for sensory impairments; maximising response by use of interviews; assessing the appropriate mode of communication).
2. Paragraphs 21.6 and 22.6 are identical (bar the final sentence of the former which is omitted from the latter). One of the paragraphs could be abbreviated and cross reference the other.
3. Sections 28 and 32 cover similar ground relating to following up non-respondents and maximising response and could be merged.
4. Section 30 could be moved to follow the various sections on administering/monitoring fieldwork and maximising response, rather than interrupt their flow.
5. Section 31 on 'How to get the questionnaires to service users' could be merged with, or moved to follow, section 27 'Sending out and booking questionnaires'.
6. Paragraph 35.2 largely repeats some of the content at 32.3. It could be revised to a single sentence cross referencing back, for example 'For the reasons mentioned at section 32, 'Tailoring the questionnaire', any reformatting of the questionnaire is discouraged'.

4 A discussion of data collection modes in the ASCS context

The features of postal, face-to-face and telephone interviews set out in Appendix B are broadly consistent with relevant research literature. The following discussion of the modes used on the ASCS, or which could be considered for use, draws on work conducted by ONS on the application of different modes of data collection on government surveys (Betts and Lound, 2010), which contains references to the sources information).

4.1 Mode effects

Social desirability bias, which is mentioned in this section of the Guidance, is one of the two main forms of mode effect, a form of measurement error. Inherent properties of data collection modes can cause differences in the answers a respondent would provide in each. They are caused by interrelationships between: the presence or absence of an interviewer; whether questions and answers are communicated visually or orally; and factors such as the question type (e.g. behaviour, factual, opinion, sensitive), task difficulty, respondent ability and motivation, and survey conditions.

The second main type of mode effect, not directly covered in Appendix B of the Guidance, is 'satisficing', where the respondent does not perform all the stages of the cognitive response process optimally. The stages are comprehension of the question, retrieval of information or formulation of an opinion, judgement as to how the information retrieved or opinion formulated maps onto the required question format, and provision of a response. Respondents will shortcut the process in ways such as 'acquiescence' or agreeing to statements (which requires less effort than coming up with reasons to disagree), non-differentiation or rating a series of items to the same scale point, always selecting the middle point in a scale, and response order effects - selecting response options later in a list read aloud (the recency effect) or earlier in a list presented visually (the primacy effect). Satisficing varies in its strength or weakness and whether done consciously or unconsciously.

Generally speaking, satisficing is more likely in self-administered modes than in interviewer administered modes, where interviewers can assist or motivate respondents. Social desirability bias occurs more in interviewer administration than in self administration. However there is some inconsistency in the evidence and areas of uncertainty remain, such as what constitutes a sensitive question, what the social norms are, and whether face-to-face interviews are more or less susceptible to social desirability bias. However, satisficing may well be exacerbated among the ASCS survey population who are likely to have greater cognitive difficulty in comprehending questions and formulating answers compared to the general population.

The fact that the ASCS is intended to be administered both by self completion and interviewer modes thus brings the possibility of mode effects on measurement error, which may affect the cross-sectional estimates, depending on the proportion of responses obtained by different modes, and comparisons over time or between surveys. However, the need to use a mixed mode survey system for this survey, utilising both self and interviewer administered modes as set out in the Guidance, is clear.

4.2 A mixed-mode system for ASCS

It is somewhat difficult to gauge which mode is optimal with regard to reducing the different types of mode effect. For example, attempting to mitigate satisficing by conducting more interviews may lead to greater social desirability bias. That this survey population will include a substantial proportion who require assistance or proxy response complicates things further.

On balance, it is recommended that the use of interviews be maximised to the greatest extent given the resources available to councils. We advocate a hybrid concurrent and sequential mixed mode design. At the initial contact stage the concurrent mix would be an interview for users assessed as requiring one and postal to everyone else (plus the option for people receiving a postal survey to request an interview). The sequential mix element would come into play during the follow up stages, whereby interviews would be offered to postal non-responders.

To an extent this is already what the Guidance suggests; we recommend the description of the mixed mode design be more formalised, and emphasis put on the proactive use of interviews.

Assessing the need for an interview at the initial stage of data collection is already covered in the guidance, but the use of interviews could be further promoted by asking councils to offer an interview when sending reminders to non-respondents, if not at the first reminder stage then at the second reminder stage (which, as previously mentioned, it is recommended be done by all councils). Thus councils may need to build a more intensive phase of interviewing toward the end of fieldwork into their project management.

Such a mixed mode design ought to increase accessibility to the survey, improve response rates over postal mode only, and enhance data quality by reducing non-response bias and obtaining better quality answers due to the ability to explain the meaning of questions and negotiate/interpret responses. If councils vary in the extent to which they are able to conduct interviews, and thus differ in the levels and types of non-response bias and measurement error obtained, this might affect comparability of results between them. However, the aim to enhance data quality wherever possible ought to be the priority.

To minimise interviewer variability it is recommended that guidance be provided regarding the assistance interviewers can provide (see 3.13.3). To reduce measurement differences between different modes, the same guidance could be provided to people assisting with self-completion. This may help minimise assistants biasing estimates due to them leading respondents toward certain answers, providing their own views rather than those of respondents, and respondents giving answers which they think more acceptable to the assistant.

4.3 Designing questionnaires for use in mixed mode surveys

The research literature considers the possibility of designing questionnaires for use in mixed mode surveys to reduce mode effects and other forms of measurement error (for example, see Dillman, Smyth and Christian, 2009). The main approaches are 'unimode construction', whereby questions are identical (or almost) in all modes; 'mode-specific construction', whereby the particular capabilities of each mode are utilised to the full; and 'mode-enhancement construction', whereby features not

available in all modes are used to improve quality in the primary mode, where there is one. In all approaches the aim is to provide common stimulus in each mode, which does not necessarily mean identical questions, and enhance the probability of obtaining equivalent data. There is uncertainty as to the effectiveness of the different approaches.

In the ASCS context, it would seem that mode-enhancement construction is not appropriate; while it would be desirable to achieve as large a proportion of responses by post, and this could be considered the primary mode, the importance of interviews to obtain data from those unable to self-complete would argue for it to be considered equally important. A mode-specific construction would seem appropriate, maximising the features available in each mode. This does, however, mean different versions of the questionnaire need to be developed and maintained from year to year in parallel.

Therefore, the pragmatic approach may be unimode construction. While the model questionnaires are virtually identical for self-completion and interviewer administration, they are not strictly unimode because they have not been developed in tandem to be appropriate to both modes. Rather the self completion questionnaire has simply been used for interview administration with minimal adaptation (for example reference to show cards in face-to-face scripts and to running prompts in telephone scripts). However, there are issues with the interview versions of the questionnaires, as covered in at 5.2.2.

In conclusion, a medium to long term view of the survey needs to be taken in order to assess whether a redevelopment of the questions to be suitable for different modes is desirable or feasible. The assessment would need to cover the extent to which interview modes are used compared to self-completion (even a substantial minority proportion of responses collected by interviews would merit a redevelopment) and the capacity to adapt and test the questions in different modes.

4.4 Internet data collection

The growth of internet surveys in the last few years leads to consideration of this as a mode to be used on the ASCS. The internet mode offers potential benefits in respect of fieldwork costs, speed of response, data processing and more sophisticated data collection instruments (with routing and validation) compared with paper self-completion. However there are disadvantages and logistical problems which lead to the conclusion that it is probably not a suitable mode for this survey, even as part of a mixed mode design.

There is low coverage (i.e. access to and use of the internet) among the population this survey is targeted at. For example, among the population aged 65 and over, 60 per cent had never used the internet and another 7% had last used it more than three months ago (ONS, 2010). Among the 32% of people aged 65 and over who had used the internet in three last three months, 13% used it once a month or less. Among individuals (of all ages) with illness or disability limiting their activities, 39 per cent had never used the internet. Among widowed adults the figure was 68 per cent. Among adults with an annual income of less than £10,399 it was 69 per cent. It seems likely that the ASCS survey population will include a substantial proportion of people either without access to the internet, or who are infrequent users, or who would find it difficult to respond by that mode. Indeed, among the councils consulted the internet was thought 'inappropriate'.

Even if there were no issues of internet coverage and use, response rates to internet surveys are lower than those to other modes, when single mode surveys are compared. When a choice of mode is offered to people in a concurrent mixed mode design, for example postal and internet, response can actually decrease compared to use of a single mode, as the decision required as to which mode to use breaks the response process (known as the 'paradox of choice'). Offering choice may only obtain a small proportion by the internet rather than postal, as people tend to respond by the easier method, in this case postal (the 'mode at hand' principle).

Furthermore, there would seem to be logistical and management issues that would be hard to overcome. In view of the small proportion of responses likely via the internet it would not be cost effective for councils to each set up or subcontract their own internet data collection systems, unless they already have arrangements in place for all their surveys. The alternative would be for NHS-IC to set up a central system, with associated development costs and need for effective monitoring of fieldwork e.g. informing councils of who had and had not responded. The questionnaire would also need to be adapted for internet mode, and need to be maintained in parallel with the version used in other modes.

These factors would seem to preclude the internet being used even as the first mode in a sequential mixed mode design (i.e. offering internet first, then postal to non-responders, then interview modes), or in a concurrent system, let alone as a single mode.

5 Comments on the survey field documents

5.1 *Model questionnaires – Appendix C-1 to C-8*

Note that in the following comments on the questionnaires we have largely concentrated on general question design principles rather than the specifics of measuring quality of life and satisfaction with social services and how well the questions will fulfil the purpose of generating key outcome measures. This is because PSSRU and SSUSG have clearly done a lot of development work and have greater expertise in the topic matter than we do.

We acknowledge that some of the concepts in the questions are subjective and difficult to define without including lengthy definitions which might be ignored or misunderstood, or breaking topics down into more questions. However, some questions may need to be reviewed.

We also acknowledge that some questions have been used on other surveys and that consistency of questions is desirable in order that comparisons may be made over time with previous surveys or between different surveys. However, we do have some concerns about the complexity and construction of some questions, which apply generally but are particularly relevant to this survey population, some of whom are likely to have lower cognitive ability due to age, frailty and disability. Comments and suggestions are therefore given for NHS-IC's consideration.

5.1.1 **Front cover**

The model questionnaires include, at the front, a copy of the cover letter. Since the questionnaire will always be sent in the same envelope as a letter this is superfluous. Instead the front page of the questionnaire could be made more appealing, using for example a picture background (e.g. a photograph or montage of services being provided/used), with the survey name in large type at the top, a brief description of it (one sentence), a brief reminder of confidentiality, and council contact/help information. It should mention the return date and the envelope provided.

5.1.2 **General layout/visual design**

Generally the questionnaire 'paralanguage' – visual layout and graphical features which help respondents to navigate the questionnaire and distinguish between question wording, instructions, response categories etc - is fine. Different font styles and weights are used consistently. However there are exceptions which should be corrected or changed.

1. The instructions/definitions under Q1 and Q12 should be in italic, non-bolded font, as at other questions.
2. The instructions/definitions at Q7, Q9, Q12, and Q20 should be indented.
3. The instruction/definition at Q13 should be a separate paragraph.
4. The 'Please tick...' instructions are in the same font size and style as the question wording, and should be different (e.g. bold italics).

Vertical spacing between questions: where there is more than one question on a page there should be enough space to clearly separate them visually. Generally this is done throughout the model questionnaire but there are occasions where more space should be used (for example in Appendix C-1, between Qs 15 and 16).

Alignment of response categories: it is recommended that the response categories be left aligned rather than right aligned, so that none are given visual prominence over others (meaning for example that shorter ones could be missed). Use tab leaders (i.e.) across from the category description to its corresponding answer box. Alternatively the answer boxes can be moved to the left of the response category descriptions. Either way the response category/answer box area should still be left-indented compared with the question text.

5.1.3 Comments on the questions

Q1.

- To be balanced and less leading the question should ask ‘how satisfied or dissatisfied...’

Q2.

- The question could be reworded to shorten it and remove some repetition, for example “Thinking about both good and bad things, how would you rate the quality of your life as a whole?”
- The middle category ‘Alright’ could be interpreted as more positive than negative, so unbalances the scale. A more neutral wording is recommended, such as ‘neither good nor bad’.

Q4.

- The inclusion of ‘personal care’ seems superfluous given that it is not used in the response categories, and unnecessarily lengthens and complicates the question. It could be reworded to ‘Which of the following statements best describes how clean and presentable in appearance you feel?’
- Strictly this is a double question, covering both cleanliness and presentability; it might be that a respondent feels differently about the concepts. This is tacit in the switch from the positive categories which use ‘and’ (meaning a respondent must feel both clean and presentable to choose it), and the negative categories which use ‘or’ which implies only one or the other needs to be felt, not both. In terms of the intended purpose of the question this may be a correct distinction. The third and fourth categories actually cover more permutations of cleanliness and presentability than the first two, but this may be too subtle for respondents. The second and third categories may not be interpreted in mutually exclusive ways. A possible solution would be to replace the third category with two: ‘I feel clean but less than adequately presentable’ and ‘I feel presentable but less than adequately clean.’

Q5.

- Similarly to Q4, this question conflates two concepts – adequacy and timeliness of food and drink (it could be considered to be four concepts: someone may have adequate drink but not food, but potential single term replacements, such as ‘nutrition’, might be too technical or abstract for this population). This again requires the response categories to be complex and subtle. Thus again there could be a greater number of response categories.
- The fourth response category abruptly introduces a new concept of risk to health to differentiate it from category three. Could this be reworded to remove the new concept but convey a greater degree of inadequacy in timeliness and/or quality of nutrition?

Q6.

- Similar comments apply regarding the conflation of cleanliness and comfort.

Q7.

- The instruction/definition could have some repetition cut, for example 'We mean how safe you feel both inside and outside the home. This includes...'
- The distinction between categories two and three is unclear: to be less safe than desired is to be inadequately safe. The categories could be better graded by adequacy (e.g. completely safe; mostly safe; not always safe; not at all safe).

Q8.

- Compared with the preceding few questions, this question changes from the continuous present tense to the past tense ('you've had'); it could be changed to 'you have'.
- Categories two to four omit 'I like' but should include them to be conceptually equivalent to category one.
- The fourth category conflates two concepts, amount of contact and feelings. Someone could have little or no social contact, yet be happy about that. The category could therefore be reworded to, for example, 'I feel socially isolated'.

Q9.

- The distinction between the first two categories is not a clear one. The second could be reworded to, for example, 'I'm able to do most of the things I value or enjoy with my time'.
- The third category would need revising as a consequence, for example to 'I can only do some of the things I value or enjoy with my time'.

Q10 and Q11.

- At both questions, the use of both 'think' and 'feel' seems unnecessary, since feeling in this sense relates to thought. Could 'think and feel' be replaced by 'feel', at both questions including in the response categories? This would simplify the questions.
- Similarly at Q11, could 'helped and treated' be replaced by just 'helped', since help could encompass treatment. Furthermore, might treatment imply medical treatment rather than social services, a different subject?
- The purpose, development and design of these questions are explained at Appendix D of the Guidance. It is not clear that Q10 will capture the issue of coming to terms with consequences of disability – *having* help could still be interpreted as being about the nature of help (its presence rather than absence). It's acknowledging the *need to have* help which seems important to do prior to the question about the quality of help itself. Might Q10 be better worded as '... best describes how needing to have help to do things make you feel about yourself?'. The response categories could then be changed to 'needing help...'
- The categories are unbalanced – one positive, one neutral, two negative. An additional positive category would address this, mirroring the 'sometimes'/'completely' pairing. For example, at Q10, 'needing to have help makes me think better about my self all the time' and 'needing to have help makes me think better about my self some of the time' (and the same for Q11)
- Q11 could be simplified to: 'Which of these statements best describes how the way you are helped and treated makes you feel about yourself?'

Q12.

- Research literature recommends avoiding the use of 'code all that apply' questions such as these. Rather, forced choice questions should be used, in all

modes (see reference in Betts and Lound, 2010). Better quality data is obtained; greater consideration is given to each item in the list and more responses are selected. Therefore it is recommended that this be replaced with a series of questions with yes/no alternatives. For example, '12a. Do care and support services help you to have control over your daily life? Yes/No'; '12b. Do care and support services help you with personal care? Yes/No'; etc. An introduction would state 'the following questions are about the ways care and support services help you. By care and support...'

- 'Meals' needs expanding for example to 'by providing meals' or whatever is appropriate.
- Other categories also need expanding, such as '*enabling* social contact...'; 'to do things...'; 'in feeling safe...'; 'in keeping my home...'

Q13.

- This question covers too many concepts; the ease or difficulty could vary by type (information, advice); source; medium (written, verbal); and topic (support, services, benefits). If a single global impression is required, accounting for such variation, a term such as 'on the whole' or 'in general' needs to be added. Alternatively, the question could be broken into parts, with the same scale for each element.

Q14.

- Similar comments as at Q12 regarding 'code all that apply' apply here. Each question would ask '...would you talk to [name]? Yes/no'.
- This is a hypothetical question – there is no guarantee that respondents would do as they say – and answers should be treated with caution.
- Furthermore, there is no way of knowing the underlying reason for an answer; for example, if they would not talk to a keyworker, is that because they would not trust them to deal with the issue properly, or not think them responsible for dealing with the issue, or because they were the cause of the worry, or what?

Q16.

- This may be better asked as two separate questions, retaining the format of other questions rather than introducing the potential complication of ticking one box in each group.

Q17.

- Similarly, these might be better split into four distinct questions – matrix style questions are difficult for some respondents to cope with, particularly those with some cognitive difficulty.
- There is a mismatch between the concept of 'usually' in the question stem and 'ease/difficulty' in the response categories – they should be consistent. Frequency is somewhat implied in the response categories – 'easily' implying usually/always; 'difficulty' implying sometimes; 'can't' implying never. The questions could be rephrased to 'How easy or difficult is it for you to get around indoors by yourself' etc. However, the fluctuation in their conditions for some people mean either way it might be difficult to capture both frequency and difficulty for an activity in a single question.

Q18.

- Similar comments to Q17 apply here.

Q19.

- The meaning of 'your needs' might need explanation; for example, is it intended to mean needs specifically relating to their health/disability, or generally? Different answers might apply.
- Does 'is designed' imply any or all of provision of adaptations, or the original building design, or facilities and furnishings? Again, answers might vary.

Q20.

- A definition of 'local area' seems necessary as interpretation will vary.
- The use of 'unable to get to all the places' in the third category may be confused with the final category (that is, a respondent may read down to the third one, think it means the same as I don't leave home, and not see the fourth category which would be more appropriate). We suggest it is reworded, to, for example, 'I can only get to a few places...'

Q21 and 22.

- These questions would be better as individual, forced choice questions.

Q22.

- If a user has a personal budget, it is not clear whether they should answer with category 1 or 3 – is it the user's own money?

Q23.

- This question should ask 'Did you have any help answering this questionnaire?' This then encompasses both physically writing the answers and the other types of help covered by Q24
- The category wordings don't require 'yes' and 'no'

Q24

- Regarding the first category (which is implicitly a category which can not be recorded with another), a respondent may have written the answers but had some form of help. It could be revised to 'I had no help'.

Q25.

- It would be worth adding something to the effect that even if they answer yes here, there is no obligation to take part in future.
- Comments on this question were made above with regard to the Guidance section 24/25.

5.1.4 Questionnaires for users with learning disabilities

- Among the councils consulted the view was expressed that the images used in the questionnaires for people with learning disabilities could be improved.
- It was also said that the questionnaire was too long for this user group, though views on length were mixed, and that matrix-format questions were unsuitable.
- We recommend that the question stem text be moved underneath the images used; as it stands they are separated from the response categories and the stem risks not being read.
- The use of smiley faces, differently sized ticks/crosses and thumbs up/down is generally good in conveying answer scales. However, the use of a thumbs down symbol and a cross for middle/neutral points is misleading and should be reviewed.

5.2 Face to face and telephone interview scripts - Appendix E-1 to E-5

5.2.1 Introductions and informed consent

The introductory part of these scripts is essentially a copy of the cover letter included with postal questionnaires. It would be better to tailor the content to the interview situation, explaining much the same content but reflecting the different environment. The content should be as brief as possible in view of the ability of respondents to understand and retain information, but comprehensive in respect of covering the essential points. Administration of the consent form should be explicitly covered in the script. In this way interviewer consistency will be encouraged. However, interviewers will need to be flexible in rephrasing the content to be appropriate to the respondent's ability. If someone else is present, to assist the respondent, the points should still be directed primarily at the respondent but involving the assistant as necessary.

For example, in the face to face context (for non-learning disability groups), which will have been pre-arranged, presumably, the interviewer would cover these points:

- Interview introduces him/herself: name, role/department/council.
- Thank you very much for agreeing to meet me today. Firstly I will explain what the survey is about.
- We would like your views on your quality of life and how the care and support services you receive from [department] have affected it.
- You were selected at random ... [etc – as per script], along with lots of other people.
- If you are happy to take part, answering the questions will take about twenty minutes. If you choose not to answer ... [etc].
- [Mention any intention to audio record the interview].
- The results will be used ... [etc].
- Your answers will be treated as confidential ... [etc].
- Would you like to ask me any questions about the survey?
- [Administer consent form] Please read this form, taking as much time as you need. [Allow adequate time; assist the respondent with reading and understanding if required]. If you are happy to take part, please sign and date the form [show the respondent where]. [If someone is assisting the respondent ensure they complete the relevant part of the form].
- [Assessment of capacity to consent: what interviewer should do if they consider R doesn't have capacity].

For people with a learning disability the content would be similar but simplified as per the script E-3.

For telephone interviews the scripts E-4 and E-5 would be modified, depending on whether the interview was prearranged or the call is the first contact. If the latter, the introduction should explain that this survey is being conducted which is already known in the face to face context:

- Interviewer introduces him/herself.
- I am calling to ask if you would agree to take part in a survey which [council/department] is carrying out, about care and support services.
- [etc]

It is unclear from the Guidance whether a record of the respondent's consent to take part is required for telephone interviews and if so how this should be administered. Unless there is good reason why verbal consent in telephone interviews should not be sought, the script should build in a similar step, setting out the points covered in the form used in face-to-face interviews and asking the respondent to indicate if they happy to participate. However, a balance needs to be sought between the provision of sufficient information and the ability of respondents (who are likely to be in lower cognitive ability groups) to understand, retain and process it, so a briefer version should be developed.

Regarding the consent form Appendix F-8, the bullet point relating to being able 'to see or have read to me what is recorded before it is used' is somewhat unclear: does it refer to the answers recorded on paper (as implied by 'see or have read') or to any audio recording of the interview (as implied by 'what is recorded')? If the former, the statement should be reworded. If the latter, it could be moved down to the subsequent section on audio recordings.

5.2.2 Face to face and telephone interview question administration

1. Some differences between the self-completion and interviewer administration scripts are noted. These are not always consistent between interview scripts. For example, in appendix E-1 and E-4 'Could you tell me' is added before Q3, but is not in E-2 or E-5. There is no apparent benefit to this lengthening of the question stem.
2. Some of the questions are lengthy for verbal administration – difficult both for interviewers to phrase properly and for respondents to absorb. This is particularly the case for telephone interviews.
3. Similarly, while face to face interviews can employ show cards, in telephone interviews some of the response category lists are very long; they may be subject to satisficing (in particular response order effects) as discussed above.
4. However, a revision of the questions to make them suitable for use in all three modes (unimode construction) or to specific to each mode's properties but equivalent in stimulus (mode-specific construction) would require more development time than is possible in this review. Therefore specific comments on the scripts are limited.
5. Questions using show cards ought to make reference to them in the wording; for example, 'looking at this card' or '...at card 1'; this will ensure consistency of administration across interviewers.
6. NHS-IC could consider providing model show cards to councils, to reduce burden and promote consistency. ONS has produced Guidelines for Designing and Producing Show cards¹¹
7. In telephone interviews it will be important for interviewers to be aware that for the 'running prompt' questions they should read out all categories before allowing the respondent to answer; there is danger of the respondent interrupting at the category that sounds right to them, but a subsequent one could be more appropriate.
8. For the 'tick all that apply' questions – unless changed to forced choice as recommended above – interviewers need say 'please choose as many as apply' and to probe 'anything else' until the respondent has selected all that apply. On the telephone, forced choice format is required.

¹¹ Available at <http://www.ons.gov.uk/about/who-we-are/our-services/data-collection-methodology/reports-and-publications/index.html>

9. Interviewers may need to be reminded specifically to read out the preambles to each section. The transitions between sections should be clear; for example before section 2 the interviewer would read “The next questions are about your quality of life. When answering....etc”
10. Similarly, they should read out the italicised definitions, to ensure consistency across modes.
11. The above points about interviewer administration should be covered in a section in the guidance.

5.3 Covering letters and forms – Appendix F-1 to F-8

Generally speaking, the model letters provided for councils’ use at Appendix F of the Guidance are in keeping with good practice, such as that recommended in Dillman et al (2009). They contain the required items of information and are personalised. We have a few suggestions for the content, as follow.

5.3.1 Appendix F-1 and F-2: letters to users in the community and care homes

1. Since the letter is to be sent in the name of the director of social services, the letter could be even more personalised by replacing references to ‘we’ to ‘I’. For example, “I am contacting you because...”
2. The Guidance at Section 31 helpfully suggests adding the director’s signature; to encourage this being done the model letters could incorporate this as one of the highlighted fields.
3. The fact that this is a survey is not explicitly mentioned until several paragraphs in (under ‘What to do if you need help...’). A recipient may think the letter is asking them to participate in some other form of research or consultation and read no further. We suggest appending ‘in the enclosed questionnaire’ to the penultimate sentence of the first paragraph.
4. Phrases such as ‘we want...’ and ‘we would like’ recur; some of these could be replaced with words more expressive of gratitude and the usefulness of the response, for example, ‘we would greatly appreciate...’; ‘we greatly value your views...’
5. Typographical error: delete ‘answer’ in the sentence ‘If you choose not to answer take part...’
6. A reference to the availability of versions in languages other than English and in alternative formats (e.g. large print, Braille, easy read) should be added after the section on ‘what to do if you need help...’
7. The references to returning an uncompleted questionnaire may convey tacitly the undesirable impression that non-response is normal or acceptable; while this may be to provide reassurance to a vulnerable population and remove the need for reminders to be sent in a small number of cases, it is recommended that they be removed. There is already a reference to the voluntary nature of the survey and lack of negative consequences.
8. The reference to what to do if you ‘would like to know how to obtain information on the results’ seems unnecessary; respondents can indicate on the questionnaire if they would like a copy of the report.
9. The section on confidentiality could be moved up beneath that on ‘What we would like you to do’.
10. The letter is quite long and, by necessity, contains quite a lot of information; in addition to the couple of suggested deletions above, any other opportunities to remove extraneous words should be taken, to keep the letter as brief as possible, while keeping the language simple. For example, with reference to needing help,

the phrase 'if you would like' could be removed without affecting the sense; similarly, with reference to the unique code on each form, so could the words 'used for administration purposes'. The sentence 'please remember it is your views and experiences ...' could be shortened to 'But it is your views that are important to us, rather than the views of anyone that helps you.'

11. If a council is using incentives, the letter should mention this; for example, 'I am enclosing a small token of appreciation with this letter to thank you for your help', or an appropriate sentence if the incentive is conditional on completion).

5.3.2 Appendix F-3 and F-4: letters to users with learning disabilities

1. These adaptations would seem to be successful in using a format and language appropriate to this category of sample members. Research with people with learning disabilities is not an area we have extensive experience in and we defer to the expertise of the survey developers. However, as per the comments above, there may be scope to simplify the language and remove extraneous words.
2. Under 'The Questions', might the reference to 'lots of questions' be off putting to this group? The words 'lots of' could be deleted.
3. The reference to asking 'lots and lots of people' may give the impression that non-response does not matter much. A different way to convey that they have been selected at random and that their response is of value might be 'you and some other people were chosen by chance to take part'.
4. Under 'If you need help', it would be more reassuring to say that 'someone there *will* help you'.
5. Under 'Sending the form back' the sentence 'The envelope does not need a stamp' could be rephrased – e.g. 'you do not need to put a stamp on the envelope' or 'there is already a stamp on the envelope' – in case any respondents think a stamp put on by the council could be taken off.

5.3.3 Appendix F-5: letter to care home managers

1. The first sentence of this letter implies that it is to be sent out at the same time, or later than, the questionnaires to the sampled residents. It would perhaps be better timed to be sent shortly in advance, so the manager is aware of when the residents will received the survey.
2. The letter could recommend more explicitly to the manager that they inform their staff of the survey, should they be asked to help by a resident, to reinforce the existing content about the procedures to be followed by anyone assisting.
3. As mentioned above, regarding section 13 of the Guidance, the letter to care home managers could explain that the number of residents selected in each home will be too small to deliver robust results at that level, which may lessen managers' concerns.
4. The tone of this letter suggests that it is the first contact between the council and care home manager; however, wouldn't the manager have been contacted previously, to assess capacity to consent to take part of sampled residents? If so, some reference to that earlier process could be made. If not, the procedure for assessing capacity to consent to take part needs to be covered in the letter.

5.3.4 Appendix F-6: letter giving advance warning of interview

1. In addition to points made with regard to other letters also applicable in this context, this letter implies that it is a 'cold call'. If this letter is to confirm an

appointment previously made by telephone or in person, the letter should refer to that contact. An optional field could be added to this effect.

5.3.5 Appendix F-7: reminder letter

1. The letter could be even more personalised by changing 'We recently sent you...' to 'I recently sent you...'
2. For a similar reason 'As we have not heard from you yet,' could be inserted before 'I would like to invite you again to help us...'
3. Replace the '/' in the third paragraph with 'or'.

6 Sample Design

The benefit of using a probability sample is that one sample realisation can be used to estimate characteristics for the whole population within known levels of confidence. However, the very fact that not all the population is measured can lead to two types of sampling error:

- *Sampling bias* if there is a systematic failure to observe some elements because of the sample design.
- The same sample design can yield many different samples leading to estimates of population values that vary. This variation is termed the *sampling variance* and the term precision is used to denote the levels of variance. Thus if the sampling variance of a survey statistic is low, we say it has high precision.

The extent of error due to sampling in any survey, including the ASCS, can be attributed to four basic design principles:

- 1) The size of the sample selected
- 2) What chance each frame member (service users for ASCS) has of selection into the sample
- 3) Whether frame members (service users) are drawn directly and independently (or in clusters)
- 4) Whether the sample is designed to assure that key subgroups of the population are represented in the sample (called stratification)

It is important to note that random selection alone does not guarantee that a given sample is representative. For example, it is quite possible that a random selection might not select service users from a key subgroup. This could lead to bias in the sample estimates if that key subgroup responds differently to other subgroups.

6.1 The set sample size

The ASCS requires robust estimates at council level as, in addition to each council's internal use, the data is used for comparison with other councils by the Care Quality Commission (CQC) as part of their monitoring function. The surveys will be used to populate council level performance measures which will be based across all service users.

Each council can download an excel template containing standard statistical formulae, under independent *simple random sampling*¹² (srs) conditions, for calculating the actual sample size required for a given level of precision¹³ for overall estimates across all service users.

The current ASCS sample design requires that each service user on a council has the same chance of selection into that council's sample i.e. that the sampling frequency is the same across the whole service user population in that council. In addition, a uniform response rate is expected across the whole sample: this is to

¹² The ASCS guidance is to generate a systematic random sample (SysRS) but it is still appropriate to use standard formulae as for a simple random sample (SRS).

¹³ set at +/-5% for an estimate of 50% from a single question for the 2010-2011 survey

identify the total number in the set sample that should deliver the required sample size.

If the sampling frequency and uniform response rate do hold true, then it is appropriate to use the standard SRS formula for calculating the required sample size and the derivation of unbiased estimates for each council can be obtained without the need for any weighting adjustment.

It is possible to model the potential achieved sample sizes¹⁴ for each council by using 2008/09 population data on social care service users¹⁵, **Figure 1** shows that the average required sample size for any council was 358 respondents. With the exceptions of Isles of Scilly (n=35), City of London (n=142) and Rutland (n=278), all other councils were required to produce a sample of between 320 to 380 service user responses. The actual achieved sample sizes needed for the 2010/11 ASCS survey will differ as they will be based on more recent population data.

Once the council service user population size is large, the sample size needed to give a council level estimate of a given precision does not change much, even if another population even larger is to be studied (e.g. a council that has a service user population of 5,600 would require a sample of 361 whereas a council with a service user population of 20,100 would require a sample of 377).

The current survey design includes an easy-read version of the questionnaire for service users with Learning Disabilities (LD). This has the advantage of making the survey more accessible for these service users but does cause some concern as questions 1 and 2 in the LD questionnaire have only five response categories¹⁶ instead of the seven in existence for other versions of the questionnaire.

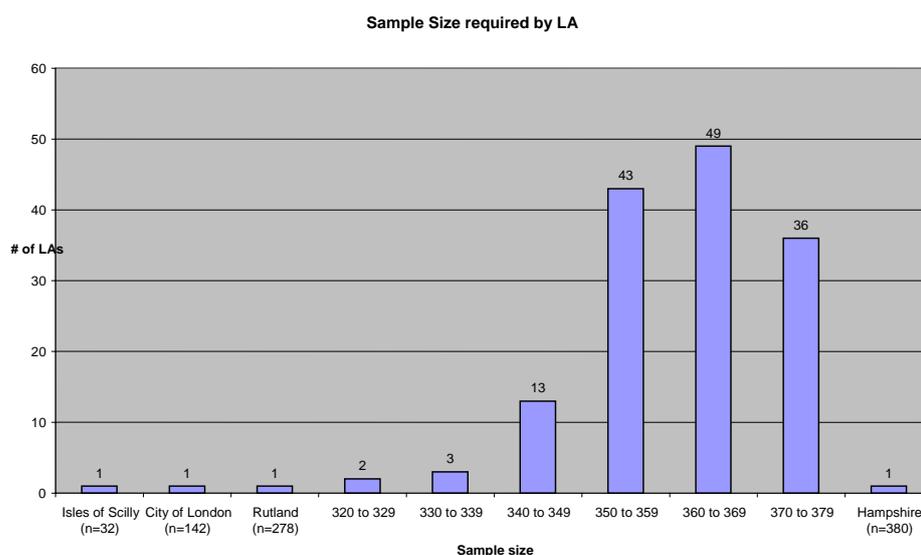
It has been highlighted that neither of these questions are to be used for headline measures and that it has been decided to report results for those with and without Learning Disabilities separately. As no increase in sample size has been recommended for service users with Learning Disabilities, there will be implications for the precision of these estimates, especially at council level - a brief description of the impact required for sample sizes is given in **Appendix 1**. The England level estimates of questions 1 and 2 should be robust if split out in such a fashion.

¹⁴ The achieved sample size is the number of questionnaires which will be returned to the NHS IC. The actual number of questionnaires which will need to be sent out will be higher than this to allow for non-response. For example, if a council predicts their response rate will be 50% then they will have to send out twice as many questionnaires than the number produced from this modelling exercise.

¹⁵ Source 2008/09 data from Referrals and Access to Care Packages table P2s and Adult Social Care Combined Activity Return table S1.

¹⁶ In the ASCS guidance section 12.1 states the reason for this is that service users with learning disabilities have been found to have too much difficulty in answering questions with more than 5 response categories.

Figure 1 Profile across CASSRs of required sample size under independent simple random sampling conditions



6.2 Stratification as an alternative sample design

Probability sample designs can be made better with features to assure representation of population subgroups in the sample. Stratification is one such feature.

In stratification the population frame is split into key mutually exclusive groups called strata. Independent random samples are then selected from each of the strata in turn.

Key benefits of stratification:

- When estimates are required for each sub-group separately
- Can reduce bias
- For ease of sampling procedures
- Can reduce variance (usually)

6.2.1 Stratification variables

Stratification first requires a variable that is likely to be correlated with the kinds of variable to be measured in the survey. Even variables with modest levels of correlation can lead to good stratification. Given the various options available for stratification it is necessary to look to variables that essentially makes sense for the ASCS. Client type¹⁷ is a variable that has been used for creating differing

¹⁷ Service type was not thought to be suitable as many service users use a variety of service types and there is high churn effect between service types which may be hard to obtain up to date data. However, a break for those in residential care and those receiving community based services was thought to be actionable.

questionnaires, is readily obtainable from service user records held by councils, and anecdotally also provides a differing response.

NHS IC have also proposed that age should be included as there have historically been differences in response here as well.

The combination of client type and age could potentially create many different strata – with very small population sizes. This would create a complicated stratification process which might be too difficult for some councils to perform competently. NHS IC has performed some analyses using 2008-2009 data and is considering that the stratification design could be restricted to just four main strata as in **Table 1**. This idea has been adopted for the remainder of this section to illustrate stratification.

Table 1 Proposed Strata

	Stratum 1	Stratum 2	Stratum 3	Stratum 4
Primary Client Group	Learning Disability	Non-Learning Disability		
Age	All ages	18-64	65+	
Community Based + Residential Care	Community Based + Residential Care	Community Based + Residential Care	Community Based	Residential Care

The above stratification scheme was discussed briefly with three councils during this review and was thought to be, with appropriate guidance, achievable for most councils. Indeed, there was evidence that some of the councils were already stratifying to create a more representative sample along these lines. Restricting the stratification design to a small number of strata in the first instance is a pragmatic step forward given the current lack of clarity on how, overall, councils currently produce their samples and interpret the guidance. Such a design will need to be consulted on within the appropriate user groups¹⁸.

6.2.2 Allocation of stratification sample

The second step for consideration in a stratification design is the allocation of the sample across the different strata. Principal amongst the key features to consider include:

- Ease of implementation
- Size of strata
- Variance of response within the strata
- Impact on precision of estimates

Proportionate stratification is selecting the sample in each stratum independently and with the same probabilities of selection. The resulting sample therefore will contain service users from each stratum in proportion to their occurrence in the population.

Disproportionate stratification selects the sample independently but with unequal probabilities of selection for each stratum. Equal allocation of the sample across the

¹⁸Councils should consider the impact on any further stratification they may perform internally such as by ward etc.

strata is one such disproportionate design as is the Neyman allocation which is the allocation that minimises the variance of the estimate of the mean.

Table 2 compares the main differences between proportionate and disproportionate allocation methods in a stratified design.

Table 2 Comparison of Proportionate and Disproportionate Allocation Methods

	Proportionate	Disproportionate	
		Equal allocation	Optimal (Neyman)
Sampling frequency	All strata are sampled at the same frequency (equal probability)	Strata sampled at differing frequency rates (unequal probabilities)	Strata sampled at differing frequency rates (unequal probabilities)
Weighting	No weighting required	Weighting required	Weighting required
Effect on variance	Depends on structure of variance between/within strata ¹⁹	Depends on structure of variance between/within strata and the range of weights required	Minimises variance of estimates
Ease of implementation for Councils	Simple	Simple as long as stratum sizes are large enough	More difficult as it requires knowledge of variance of response ²⁰ in strata
Method change from current guidelines	Could be similar to current guidance, with the requirement to create an ordered list before sample selection	Requires separate samples, with different frequency of selection, to be created on each stratum in turn	Requires separate samples, with different sample sizes and frequency of selection, to be created on each stratum in turn
Ease of processing for NHS IC	As current	Weighting required - information needed on the sampling	Weighting required - information needed on the sampling

¹⁹ For situations where the variances are similar in all strata, the proportional allocation is also the optimal allocation

²⁰ Even more consideration can be given to the fact that the ASCS and surveys in general. Tend to be multivariate where different questions produce responses that have differing variances. Under Neyman allocation, only one variable is chosen to assess the optimum sample size within strata. There is no guarantee that this sample size will be suitable for minimising the sample mean variance for other questions in the survey.

		frequencies in all strata and for all councils	frequencies in all strata and for all councils
When would it be used?	To obtain better overall estimates. When variance does not differ too much between strata	Desire to obtain better estimates for smaller strata.	Situations where the variance differs between strata

To produce unbiased estimates the disproportionate allocation methods require weighting to account for the unequal probability sampling. For example, if service users with Learning Disabilities are sampled at twice the rate of all other types of service user, then their responses should have half the weight given to the others when deriving an overall estimate. Proportionate allocation does not require any such weighting adjustment, as for the current ASCS design.

The allocation method has an impact on the variance of the estimates which is a balance between the structure of the population variance (i.e. between/within stratum variance) and the variation in any weights applied.

For the disproportionate allocation methods the impact on the precision of estimates due to the necessary weighting can be gauged by a measure called the Effective Sample Size (ESS). This measure is outlined in **Appendix 2** and has been applied by NHS IC and ONS to population data on service users for 2008-09 to assess such an impact of using an equal allocation design.

The ESS for a statistic is the sample size under simple random sampling conditions that would yield the same sampling variance as achieved by the alternative (e.g. unequal probability) design under consideration.

At a council level, under equal allocation the sampling frequencies vary between strata and therefore the weights to compensate also vary. The calculation to assess the ESS shows that an equal allocation design typically leads to an ESS of between 60 to 80% for all councils. This means that the variance of the sample mean will be larger than that obtained with a simple random sample of the same size. A proportional allocation is an equal probability design and therefore will have an ESS of 100% (i.e. same as current). **Table 3** illustrates this for an example council.

Table 3 Illustration of the Effective Sample Size under Equal and Proportional Allocation

		LD	18-64 Non LD	65+ Non LD Res Care	65+ Non LD CBS	Total	Sample Size required (under SRS)	Effective Sample Size and Sampling Efficiency
Council A								
Service User Population		500	1500	1000	3000	6000	361	
Equal Allocation	Sample size	90	90	90	90			
	Sampling weight	5.5	22.2	11.1	38.8			
	Effective Sample Size (ESS)							253
	Sampling Efficiency (ESS/Actual Sample Size)							72%
Proportionate Allocation	Sample size	30	90	60	181			
	Sampling weight	16.6	16.6	16.6	16.6			
	Effective Sample Size (ESS)							361
	Sampling Efficiency (ESS/Actual Sample Size)							100%

The Neyman allocation considers both the variance between/within strata and the impact of weights to provide what is called the optimal allocation i.e. that which minimises variance. However, the Neyman allocation can be difficult to implement as it requires knowledge of the variances in the strata, something which is not known as yet from the ASCS. Furthermore, logistical challenges would need to be resolved to ensure that councils have the correct tools to calculate sample size under Neyman allocation. Yet another issue would be on how to perform weights on the responses (either centrally or in councils themselves) and the practicalities of interpreting both unweighted and weighted data.

Of note, is that in situations where variances are similar in all strata, the proportionate allocation is also the optimal allocation in that it will minimise the variance of estimates.

Stratified social surveys do tend to have a similar variance within all strata. Although the ASCS pilot study did not provide enough information to reliably assess this²¹ it would be reasonable to assume that it would be so. When data is provided for the first ASCS, more investigation into the responses could be made to confirm the validity of this assumption.

Equal sample size allocation might be useful in situations where there is desire to obtain more precision in smaller strata. Under equal allocation, these smaller strata are sampled at a higher sampling rate than for larger strata. Overall estimates (i.e. across all strata) will have a smaller ESS than for the actual sample which will mean that there will be an increase in the variance around the overall estimates. Other drawbacks to conducting an equal sample size allocation for the ASCS are that, as identified by NHS IC, some councils might not have enough population within all strata to achieve the numbers desired in the sample. In hand with this, the problem of survey fatigue may result with the same people being required to take part in the survey time and time again.

Proportionate allocation is known to almost always lead to a gain in precision over a simple random sample (in social surveys). Under the assumption that variances are likely to be similar across strata and that neither the Department of Health nor CQC have identified a need to provide more precise data for smaller strata, the proportionate allocation method is advised. This method benefits the ASCS by requiring minimal change to the existing guidance and no change to the current processing without weights.

In fact the current sample design as a systematic random sample can be easily converted into a proportionate stratified sample if guidance is given in the creation of an ordered list where each of the strata is placed in order. Performing the systematic random selection as per the current guidance will then produce the equivalent of a proportionate stratified sample.

²¹ The pilot survey was designed to test the survey methodology rather than provide robust results. Therefore, councils who volunteered to take part in the pilot were instructed to only send out around 150 questionnaires.

Recommendation

If a better overall estimate is required at council level and no increase in sample size is desired (over the current) then a proportionate stratified design is preferable over a disproportionate design

6.3 Weighting

The results we get by estimating from the sample will differ from the true population values for various reasons with two specifically relating to sample design. Firstly, by choosing a random sample of the population using social care, we will get particular answers according to the particular sample chosen. Secondly, not all those chosen for the sample will agree to take part in the survey. If those that respond are, on average, different from those who do not respond, then the results of the survey risk being biased in favour of the former.

At council level, the ASCS advocates an equal probability design and assumes a constant response rate across the whole sample. Under such conditions, processing the responses without weights will yield estimates that are unbiased. This is as for the current ASCS.

We have seen that most councils provide the same sample size regardless of the size of their population. This means that different councils are sampling at different rates. Although estimates at council level do not need any weighting adjustment for unequal sample designs, at larger geographies like England, such a weighting adjustment is required i.e. data from councils with a large service user population should have a greater weight than that from councils with smaller populations. In **Table 4** below, each response from Council B has a weight of 53.33, over three times the weight of any response from Council A (weight of 16.67).

Table 4 Illustration of weights for creating an England estimate

	Eligible Service User Population	Actual Sample Size	Sampling weight	Weight required for England estimate = 1/sampling weight
Council A	6000	360	0.06	16.67
Council B	20000	375	0.02	53.33

Recommendation

Aside from any decision to change the sampling design with regards to stratification, England level estimates should be weighted to adjust for the different sampling rates in councils.

6.3.1 Weighting for non-response

The previous discussion has centred on the need for sample design weighting. The following section highlights the need for weighting for non-response.

The ASCS currently assumes that response rates are uniform across the whole service user population and consequently does not weight to compensate for different non-response in different sub-groups. If this assumption is found to be untrue then overall estimates within councils could be biased.

Brief interviews with a couple of councils who participated in the pilot ASCS indicate that the Learning Disability client group will suffer a higher non-response rate than for either Community Based or Residential Care users. Another area for concern is the need to exclude persons who “lack the capacity to consent”²² to take part which is thought might be around 30% of the sample in Residential Care homes²³.

It is quite probable that response rates will vary for different groups (or *weighting classes*), and this can be investigated with the data produced during the 2010-2011 ASCS. To obtain *unbiased* results, for council and England level, weighting for non-response might need to be applied.

The situation where weighting for non-response is most valuable is under the following conditions:

- response rates vary between weighting classes
- survey outcomes are, on average, different for the different weighting classes; and
- survey outcomes are, on average, similar for respondents and non-respondents within each weighting class

With lower response rates the reliance on the above assumptions becomes stronger, risking the credibility of the results. Additionally, the greater the range of non-response weights, the less the effective sample size and a subsequent loss of precision around estimates. Therefore even if weights are to be employed in the survey analysis, it is still important to attempt to achieve the highest possible response rates.

In order to weight the ASCS for non-response there must be good quality weighting class information for both the responding sample and the original set sample. In the absence of such information for the non-responders from the original sample then it is possible to use service user population totals broken down into the relevant weighting classes for each council (as it should be possible to estimate how many of each group would have been the original random sample).

²² A requirement under the Mental Health Act

²³ A report on the developmental studies for the National Adult Social Care User Experience Survey, PSSRU Discussion Paper 2721 (March 2010)

Table 5 shows how a typical non-response situation may occur in just two weighting classes.

Table 5 Non-response illustration

Council A	Number in sample	Responses	Weight
Weighting class 1	100	60	1.67
Weighting class 2	200	80	2.5

This non-response weighting would ideally need to be performed at council level to create unbiased results at that geography. Some ideas for weighting classes could be sex, age and ethnicity with the addition of a client group if investigation proves this to be suitable.

It is unclear how able councils will be in performing weighting for non-response and it is envisioned that it would have to be centrally in NHS IC. There is some concern within NHS IC and councils around how long it would take to produce weighted results although after consulting with Communities and Local Government (CLG) it was found that their Place survey were able to provide weighted results back to councils within five days of data submission although consideration must also be given to resource issues within the NHS IC²⁴.

Recommendation

NHS IC to conduct analysis of the 2010-2011 ASCS for non-response rates across client groups, age, sex and ethnicity as standard. This should be extended into an assessment of the possible bias in overall results if non-response weighting is not to be applied.

6.3.2 Further weighting consideration

The Place survey performed weighting for non-response at council level and found in some cases, especially for ethnic minority groups, weights were very large²⁵. Large weights increase the variance of overall estimates and raise issues about their validity.

It is envisioned that, for the ASCS, non-response weighting for ethnic minority groups would lead to similar, if not more extreme results (due to a much smaller sample size)²⁶. It is therefore reasoned that weighting for non-response by ethnic minority groups could not be performed at council level.

Within councils, it might be preferable to restrict non-response weighting to age/sex groups only. If an ethnic minority non-response weight is thought necessary, this might be applied separately at an England level, although consideration would be needed on how best to determine the ethnic minority service user population size.

²⁴ This was unvalidated data only. It still gave a good indication on how the weights had affected each council's results.

²⁵ This could occur if a council has a small proportion of their ethnic minority service user population. E.g. if a council has only 5% ethnic minority, then it would be expected that a random sample should contain 5% ethnic minority users. For an average sample size of 360, this would mean only 18 are ethnic minority. This is too small a number for use in non-response weighting where a minimum of 30 responses is usually required for any weighting cell. See section 3.11

²⁶ The Place survey required 1100 responses from all councils

This could possibly be done by requesting such additional data from councils own records, or by assuming that the samples generated by each council contain the correct proportion of ethnic minority users.

Applying an ethnic minority non-response weighting procedure at England level would help to smooth out extreme weights caused by the sample design although would lead to more difficulty in interpretation for results at council level. Again, resource requirement within NHS IC needs to be factored in.

Table 6 shows how such a weight might be constructed.

Table 6 calibration/Post-stratification illustration

	Sum of design weights across all responses	Population(possibly derived from sample information)	Calibration Weight
Ethnic group 1	4,000	5,000	1.25
Ethnic group 2	9,000	10,000	1.11

In this case, and in conjunction with the information in **Table 4**, the weights can be multiplied together for the England estimate. Any respondent from ethnic group 1 in Council A will be given a weight of $16.67 * 1.25 = 20.88$ (there might be additional non response rates to include in the multiplication).

6.4 Some additional thoughts

1. It is a requirement of the Social Care Research Ethics Committee to remove any service users that are found to “Lack the capacity to consent to take part” from the sample.

Such service users are considered to be ineligible for the ASCS. If there is a high proportion of ineligible service users attention may need to be given to determining the true population size and sampling rates (esp. in Residential Care if used for stratification).

The ASCS guidance requests that a replacement is found for these ineligible service users. Replacement is highly unusual in government surveys as it could potentially invalidate the premise that the sample is random and retains a constant sampling frequency, which is a requirement for the standard statistical formulae to be applicable.

It is recognised that if these users are removed from the sample but no replacement made that the response rate may be low, especially in residential care homes. The pilot ASCS data showed some quite high response rates in residential care homes which might imply that, after factoring in any loss of sample from the “lack of capacity to consent” criteria, service users in residential care homes might have high response rates. More investigation would be required from the data returned on the first ASCS.

2. Although it is preferable to retain the same sampling frequency within councils across the whole sample, it is recognised that some councils may deliberately increase the sampling rate in some groups. NHS IC would need to have procedures to understand such sampling rate fluctuations as weights would need to be applied, probably in NHS IC. More thought would need to be placed on the impact on precision of altering sampling rates within councils.
3. In the event that any weighting is required, either for differential sampling rates or for non-response, then the effective sample size will be less than the actual sample size. The ASCS excel tool currently provides the number of responses required under SRS conditions. If weighting is needed then this number can be thought of as the Effective Sample Size required to give estimates of a given precision. It would be quite difficult to know what size of sample is required to give the ESS required, but as a general gauge: the ESS could be increased by 10% say to give an indication of the numbers required for councils to deliver.
4. The standard formula for variance of estimates in a stratified design could be used. This does not factor in the effect of non-response but should still be a good approximation.

For a design with H number of strata

The population proportion in stratum h is denoted by $W_h = N_h / N$ where N_h is the number of population elements in stratum h

The sampling fraction $f_h = n_h / N_h$

The within stratum variance is given by

$s_h^2 = \left(\frac{n_h}{n_h - 1} \right) p_h (1 - p_h)$ where p_h is the proportion of the sample responding in a certain response category

Combining the above components gives the variance of the mean in a stratified design

$$v(\bar{y}_{st}) = \sum_{h=1}^H W_h^2 \left(\frac{1 - f_h}{n_h} \right) s_h^2$$

Appendix 1

Table 7 shows, for two councils, the sample sizes required to give 5% precision for an overall estimate and for LD and non-LD groups separately. The sample required to produce the overall estimate is almost the same as for the non-LD group alone. It can be expected that, in both councils, under the current ASCS guidance the non-LD group will contain approximately only 88% of the required sample size to give an estimate for that group alone (i.e. the precision will be less than required). The LD groups also require a larger sample size. For Nottinghamshire, it can be expected that only 12% of the 377 sample will be for such service users (i.e. 43 in LD sample). This is far less than the 327 required to give a 5% precision for this group alone.

If an equivalent precision is required at council level for both LD and non-LD groups then **Table 7** suggests that councils would potentially have to sample twice the number of service users as in the current sample design²⁷.

Table 7 Required sample size (under Simple Random Sampling) to produce estimates at 5% precision. For estimates across all service users and for Learning Disability / Non-Learning Disability separately

	Learning Disabilities	Non-Learning Disabilities	Total overall
Council E			
Population	2220	17060	19280
Proportion of population	12%	88%	100%
Sample size required (SRS)	327	376	377
Council F			
Population	650	4775	5425
Proportion of population	12%	88%	100%
Sample size required (SRS)	241	356	359

²⁷ Council F would also have to consider the impact of non-response as these numbers imply that, for councils with smaller population of LD service user, a large proportion of the LD group would need to be included in the sample. This might lead to survey fatigue if the same services users are repeatedly sampled for subsequent surveys

Appendix 2

Effective Sample Size

Simple Random Sampling (SRS) is often used as a basic design to which the sampling variance of statistics using other sample designs are compared. The Effective Sample Size (ESS) for a statistic is the SRS sample size that would yield the same sampling variance as achieved by the alternative design under consideration.

The ESS is primarily considered at design stage to measure the effect of an unequal probability sample design²⁸ on the precision of estimates although weighting for non-response and under/over coverage would also have an effect.

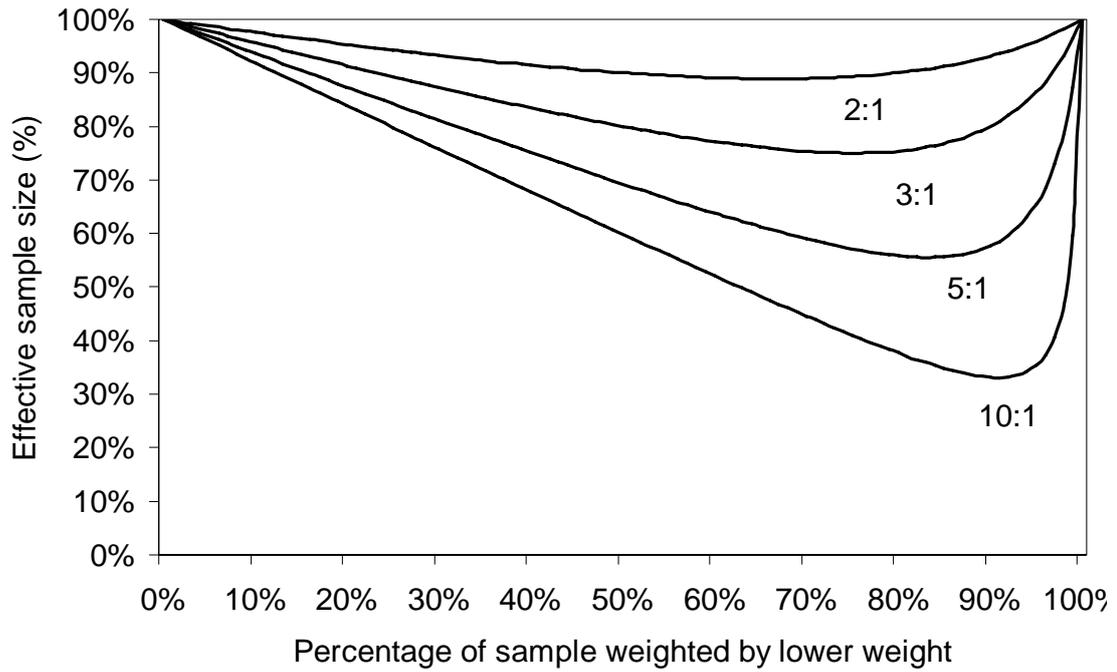
The main assumption under which the formula is derived is that the true population variances are equal in the groups having different weights. Another assumption is that independent simple random sampling occurs in the different groups.

If there are H subgroups in a sample then the sampling fraction in subgroup h is denoted by $f_h = n_h / N_h$. The sample design weight $w_h = 1 / f_h$ can be calculated and applied to the ESS formula:

$$ESS = \frac{\left[\sum_{h=1}^H n_h w_h \right]^2}{\left[\sum_{h=1}^H n_h w_h^2 \right]}$$

In general, the more extreme the difference between the weights and the smaller the classes which require the largest weights, the worse is the effect on the precision of overall estimates.

²⁸ SRS implies an equal probability sample



The sample efficiency is shown against the ratio of the weights for designs in which just two weights are required.

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