

GUIDANCE ON DATA CLEANING FOR THE NHS NATIONAL CHILDREN'S INPATIENT AND DAYCASE SURVEY 2014

THE CO-ORDINATION CENTRE FOR THE
NHS PATIENT SURVEY PROGRAMME

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Questions and comments

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1 Introduction

At the end of fieldwork for the National Children's Inpatient Survey 2014, participating trusts and contractors will be required to submit data to the Co-ordination Centre in a raw ('uncleaned') format. Once the Co-ordination centre has received data from all participating trusts, the data must be cleaned. To ensure that the cleaning process is comparable across NHS trusts, data for all trusts in the survey are collated and cleaning is carried out on the full collated dataset.

This document provides a description and specification of the processes that will be used by the Co-ordination Centre to clean and standardise data submitted by contractors and trusts as part of the National Children's Inpatient Survey 2014. By following the guidance contained in this document, it should be possible to recreate this cleaning process.

If you have any comments or queries regarding this document please contact the Co-ordination Centre on 01865 208127, or e-mail us at cyp.cc@PickerEurope.ac.uk

1.1 Scope of this cleaning guide

For the 2014 children's survey, all trusts have to submit data for all three questionnaires: the 51 questions for the 0-7 questionnaire, 53 questions for the 8-11 questionnaire and 57 questions for the 12-15 questionnaire. All cleaning undertaken by ourselves will include only this data.

1.2 Definition of key terms

Definitions of terms commonly used in this document, as they apply to the 2014 children's survey are as follows:

Raw/uncleaned data: 'Raw' or 'uncleaned' data is data that has been entered verbatim from completed questionnaires without any editing taking place to remove contradictory or inappropriate responses; thus, all response boxes crossed on the questionnaire should be included in the data entry spreadsheet¹ (see guidance manual on creating raw data). The requirement for raw/uncleaned data does not, however, preclude the checking of data for errors resulting from problems with data entry or similar. Ensuring high data quality is paramount and errors resulting from data entry problems can and should be corrected by checking against the appropriate completed questionnaire.

Data cleaning: The Co-ordination Centre uses the term 'data cleaning' to refer to all editing processes undertaken upon survey data once the survey has been completed and the data has been entered and collated.

Routing questions: These are items on the questionnaire which instruct respondents to either continue on to the next question or to skip past irrelevant questions depending on their response to

¹ Except where: a) multiple responses have been crossed - set these to missing (The exception to this is for any questions which ask respondents to 'Cross ALL boxes that apply', such as Q49 and Q50 (in the 0-7 questionnaire) where respondents may select more than one response option) b) year of birth has been entered in an incorrect format - if the patient's *intended* response is unambiguous from the questionnaire, then enter this. See Section 2 for more details on how data should be entered and coded.

the routing question. For the 2014 children's survey, the routing questions in the questionnaires are:

0-7 questionnaire: Q1, Q26, Q28, Q30, Q34 and Q49.

8-11 questionnaire: Q8, Q10, Q34, Q36, Q38, Q42 and Q52.

12-15 questionnaire: Q10, Q12, Q38, Q40, Q42, Q46 and Q56.

Filtered questions: Items on the questionnaire that are not intended to be answered by all respondents are referred to as filtered questions. Whether individual respondents are expected to answer filtered questions depends on their responses to preceding routing questions. For the 2014 children's survey, the filtered questions in the core questionnaire are:

0-7 questionnaire: Q2, Q3, Q27, Q29, Q31, Q32, Q33, Q35 and Q50.

8-11 questionnaire: Q9, Q11, Q12, Q35, Q37, Q39, Q40, Q41, Q43 and Q53.

12-15 questionnaire: Q11, Q13, Q14, Q39, Q41, Q43, Q44, Q45, Q47 and Q57.

Non-filtered questions: These are items in the questionnaire which are not subject to any filtering and which should therefore be answered by all respondents. For the 2014 children's inpatient survey, the non-filtered questions are:

0-7 questionnaire: Q1, Q4-Q26, Q28, Q30, Q34, Q36-Q49, and Q51.

8-11 questionnaire: Q1-Q8, Q10, Q14-Q34, Q36, Q38, Q42 and Q44-Q52.

12-15 questionnaire: Q1-Q10, Q12, Q15-Q38, Q40, Q42, Q46, Q48-56.

Out-of-range data: This refers to instances where data within a variable has a value that is not permissible. For categorical data – as in the case of the majority of variables in this survey – this could be, for example, a value of '3' being entered for a variable that has only two response options (1 or 2). For scalar data – e.g. year of birth – data is considered to be out-of-range if it specifies a value that is not possible (for instance, year of birth as 983 or 2983). Out-of-range responses entered into the dataset should not be automatically (e.g. algorithmically) removed prior to submitting the data to the Co-ordination Centre (see Section 2).

Non-specific responses: This is a loose term for response options that can be considered as not being applicable to the respondent in terms of directly answering the specific question to which they are linked. Most commonly, these are responses such as "Don't know / can't remember", which indicate a failure to recall the issue in question. Likewise, responses that indicate the question is not applicable to the respondent are considered 'non-specific' – for example, responses such as "My child did not have hospital food". A full list of such responses for the 2014 children's survey can be found in Appendix B.

2 Entering and coding data prior to submission

For the 2014 children's survey, trusts and contractors are required to submit raw ('uncleaned') data to the Co-ordination Centre. For clarification, raw data is created as follows:

- i) All responses should be entered into the dataset, regardless of whether or not the respondent was meant to respond to the question (e.g. where patients answer questions that they have been directed to skip past, these responses should still be entered).
- ii) Where a respondent has selected more than one response category on a question, this question should be set to 'missing' for that person in the data (i.e. left blank, or coded as a full stop (.)). The exception to this is for the 'multiple response' questions, where respondents may select more than one response option (See Section 3.3 below for details about how to enter responses to these types of questions).
- iii) Where a respondent has crossed out a response, this should not be entered in the data (the response should be left blank, or coded as a full stop (.)). Where a respondent has crossed out a response and instead selected a second response option, the second choice should be entered into the data.
- iv) Where a respondent has given their response inconsistently with the formatting of the questionnaire but where their intended response is nonetheless unambiguous on inspection of the completed questionnaire, then the respondent's *intended* response should be entered. For example, where a patient has written their *date* of birth in the boxes for Q22 (What was your year of birth), but written their *year* of birth in at the side of this, then the respondent's year of birth should be entered.
- v) For the year of birth question, unrealistic responses should still be entered *except* following rule iv) above. For example, if a respondent enters '2014' in the year of birth box, this should still be entered unless the respondent has unambiguously indicated their actual year of birth to the side.
- vi) Once the data has been entered, no responses should be removed or changed in any way *except* where responses are known to have been entered incorrectly or where inspection of the questionnaire indicates that the patient's intended response has not been captured. This includes 'out-of-range' responses, which must not be *automatically* removed from the dataset. Responses in the dataset should only be changed before submission to the Co-ordination Centre where they are found to have been entered inconsistently with the respondent's intended response.

3 Editing/cleaning data after submission

3.1 Approach and rationale

The aim of the Co-ordination Centre in cleaning the data submitted to us is to ensure an optimal balance between data quality and completeness. Thus, we seek to remove responses that are known to be erroneous or inappropriate, but do this in a relatively permissive way so as to enable as many responses as possible to contribute to the overall survey results.

3.2 Dealing with filtered questions

Some of the questions included in the survey are only relevant to a subset of respondents, and in these cases filter instructions are included in the questionnaire to route respondents past questions that are not applicable to them. For example, people who select “Yes” to Q26 in the 0-7 version (“Did you ever stay overnight in hospital with your child?”) are instructed to go to Q27, whereas those that selected all other options skip Q27.

It is necessary to clean the data to remove responses where filter instructions have been incorrectly followed. In such cases, participants’ responses to questions that were not relevant to them are deleted from the dataset. Responses are only deleted where respondents have answered filtered questions despite selecting an earlier response on a routing question instructing them to skip these questions. For example, if a respondent selects “No” to Q26 (i.e. they did not stay in hospital overnight), but then answers the subsequent question about staying in hospital overnight.

Responses to filtered questions are not removed, however, where the response to the routing question is missing. For example, Q27 is applicable to those who stayed in hospital overnight and are filtered by the response to Q26 (e.g. they are answered if Q26=1 – the respondent did stay overnight). If a respondent does not answer Q26, or if the response to Q26 is missing for any reason, then responses to Q27 should not be removed.

Figure 1, below, shows a summary of all routing questions, and the filtered questions they relate to, that are included in the 2014 children’s survey. Please note that these instructions should be followed sequentially in order to be consistent with the procedures applied by the Co-ordination Centre.

Figure 1 – Cleaning instructions for filtered questions 0-7

ROUTING QUESTION	RESPONSE VALUES	FILTERED QUESTIONS
<i>if</i> Q1 = 1		<i>then delete responses to:</i> Q2 – Q3
<i>if</i> Q26 = 2,3,4		<i>then delete responses to:</i> Q27
<i>if</i> Q28 = 2		<i>then delete responses to:</i> Q29
<i>if</i> Q30 = 2		<i>then delete responses to:</i> Q31-Q33
<i>if</i> Q34 = 2		<i>then delete responses to:</i> Q35
<i>if</i> Q49 = 7		<i>then delete responses to:</i> Q50

Please note that the instructions in the above table should be followed sequentially in the order shown above.

Figure 2 – Cleaning instructions for filtered questions 8-11

ROUTING QUESTION	RESPONSE VALUES	FILTERED QUESTIONS
<i>if</i> Q8 = 2	<i>then delete responses to:</i>	Q9
<i>if</i> Q10 = 2	<i>then delete responses to:</i>	Q11-Q12
<i>if</i> Q34 = 2,3 or 4	<i>then delete responses to:</i>	Q35
<i>if</i> Q36 = 2	<i>then delete responses to:</i>	Q37
<i>if</i> Q38 = 2	<i>then delete responses to:</i>	Q39-Q41
<i>if</i> Q42 = 2	<i>then delete responses to:</i>	Q43
<i>if</i> Q52 = 7	<i>see specific instructions below</i>	Q53

Figure 3 – Cleaning instructions for filtered questions 12-15

ROUTING QUESTION	RESPONSE VALUES	FILTERED QUESTIONS
<i>if</i> Q10 = 2	<i>then delete responses to:</i>	Q11
<i>if</i> Q12 = 2	<i>then delete responses to:</i>	Q13, Q14
<i>if</i> Q38 = 2,3 OR 4	<i>then delete responses to:</i>	Q39
<i>if</i> Q40 = 2	<i>then delete responses to:</i>	Q41
<i>if</i> Q42 = 2	<i>then delete responses to:</i>	Q43-45
<i>if</i> Q46 = 2	<i>then delete responses to:</i>	Q47
<i>if</i> Q56 = 7	<i>see specific instructions below</i>	Q57

A worked example of the cleaning process for removing unexpected responses to filtered questions is included in Appendix A.

3.3 Dealing with multiple response questions

For most questions, each column corresponds to one survey question. However, there are some exceptions to this rule. For multiple response questions for example Q25, Q49 and Q50 (0-7); Q33, Q52 and Q53 (8-11); and Q37, Q56 and Q57 (12-15) that give the instruction ‘Cross all that apply’, each response option is treated as a separate question.

Example

Q49. Does your child have any of the following long-standing conditions? (CROSS ALL THAT APPLY)

- 1 Deafness or severe hearing impairment
- 2 Blindness or partially sighted
- 3 Any other long-standing physical disability
- 4 A learning disability
- 5 A mental health condition
- 6 Another long-standing condition (eg. cancer, diabetes, epilepsy)
- 7 No long-standing condition

Responses to each part of this question are coded: **1 if the box is crossed**
0 if the box is not crossed¹

Q49 takes up seven columns in the data file, labelled as follows:

Column headings	Q49_1	Q49_2	Q49_3	Q49_4	Q49_5	Q49_6	Q49_7
Codings for this example	1	0	0	0	1	0	0

However, the last response to each of these questions is an exclusive option – respondents should not have selected Q49_7 (*'No long-standing condition'*) as well as any of Q49_1-6. If this is the case, the cleaning of Q49 takes into account the response to Q50 when deciding which options to retain, as detailed below.

- When a respondent has crossed **any of options Q49_1-6 as well as Q49_7**:
 - o If they **have also crossed any of Q50_1-7** then Q49_7 is recoded to 0 (and options question 49_1-6 remain as selected by the respondent), because their response to question 50 suggests they do in fact have a long-standing condition.
 - o If they **have not crossed any of Q50_1-7 and have not crossed Q50_8** then Q49_1-6 are recoded to 0 (and option 49_7 remains crossed), because their lack of response to question 50 suggests that they have correctly followed the routing from Q49_7, and therefore do not have a long-standing condition.
 - o If they **have not crossed any of Q50_1-7 and have crossed Q50_8** then Q49_1-7 and Q50_1-8 (i.e. all responses to Q49 & Q50) are removed (set to blank or full stop), because it is unclear which options are most likely to be correct for the respondent.

Similarly, a respondent should not have selected Q50_8 (*'No difficulty with any of these'*) as well as any of Q50_1-7, and in these cases the cleaning of Q50 takes into account responses to Q49, as detailed below.

- When a respondent has crossed any of options **Q50_1-7 as well as Q 50_8**:

- If they **have also crossed any of Q49_1-6** then Q50_8 is recoded to 0 (and options 49_1-6 remain as selected by the respondent), because their response to question 49 indicates that they do have a long-standing condition and therefore their question 50 responses of difficulties caused are likely to be correct.
- If they **have not crossed any of Q49_1-6** then all responses to Q50_1-8 are removed (set to blank or full stop) as the respondent should not have completed this filtered question.

After the above cleaning has taken place:

- If only Q49_7 is selected, any responses to Q50_1-8 are removed (set to blank or full stop), as respondents who do not have a long-standing condition should not have answered Q50.
- If any of Q49_1-6 are selected and no response has been given to Q50, then Q50_1-8 are set to missing, as Q50 should have been answered by all respondents who selected at least one of Q49_1-6.
- If no responses have been given to Q49, Q49_1-7 are set to missing and Q50_1-8 are removed (set to blank or full stop), as Q50 is a filtered question which should only have been answered by respondents selecting at least one of Q49_1-6.

Several examples of the cleaning undertaken for questions 49 and 50 are provided below.

Example 1

Q49. Does your child have any of the following long-standing conditions? (CROSS ALL THAT APPLY)

- 1 Deafness or severe hearing impairment
- 2 Blindness or partially sighted
- 3 Any other long-standing physical disability
- 4 A learning disability
- 5 A mental health condition
- 6 Another long-standing condition
- 7 No long-standing condition

Q50. Does this condition(s) cause your child difficulty with any of the following? (CROSS ALL THAT APPLY)

- 1 Everyday activities that people his/her age can usually do
- 2 In education or training
- 3 Access to buildings, streets or vehicles
- 4 Reading or writing
- 5 People's attitudes to your child because of his/ her condition
- 6 Communicating, mixing with others and socialising
- 7 Any other activity
- 8 No difficulty with any of these

BEFORE CLEANING:

Q49 is coded as follows:

Column headings	Q49_1	Q49_2	Q49_3	Q49_4	Q49_5	Q49_6	Q49_7
Coding for this example	1	0	0	0	1	0	1

Q50 is coded as follows:

Column headings	Q50_1	Q50_2	Q50_3	Q50_4	Q50_5	Q50_6	Q50_7	Q50_8
Coding for this example	0	1	0	0	0	1	0	1

AFTER CLEANING:

Q49 is coded as follows:

Column headings	Q49_1	Q49_2	Q49_3	Q49_4	Q49_5	Q49_6	Q49_7
Coding for this example	1	0	0	0	1	0	0

Q50 is coded as follows:

Column headings	Q50_1	Q50_2	Q50_3	Q50_4	Q50_5	Q50_6	Q50_7	Q50_8
Coding for this example	0	1	0	0	0	1	0	0

When the data is cleaned, the responses to Q49_7 and Q50_8 are re-coded as 0 because the respondent has also selected responses for some of both Q49_1-6 and Q50_1-7.

Example 2

Q49. Does your child have any of the following long-standing conditions? (CROSS ALL THAT APPLY)

- 1 Deafness or severe hearing impairment
- 2 Blindness or partially sighted
- 3 Any other long-standing physical disability
- 4 A learning disability
- 5 A mental health condition
- 6 Any other long-standing condition
- 7 No long-standing condition

Q50. Does this condition(s) cause your child difficulty with any of the following? (CROSS ALL THAT APPLY)

- 1 Everyday activities that people his/ her age can usually do
- 2 In education or training
- 3 Access to buildings, streets or vehicles
- 4 Reading or writing
- 5 People's attitudes to your child because of his/ her condition
- 6 Communicating, mixing with others and socialising
- 7 Any other activity
- 8 No difficulty with any of these

BEFORE CLEANING:

Q49 is coded as follows:

Column headings	Q49_1	Q49_2	Q49_3	Q49_4	Q49_5	Q49_6	Q49_7
Coding for this example	1	0	0	0	1	0	1

Q50 is coded as follows:

Column headings	Q50_1	Q50_2	Q50_3	Q50_4	Q50_5	Q50_6	Q50_7	Q50_8
Coding for this example	0	0	0	0	0	0	0	1

AFTER CLEANING:

Q49 is coded as follows:

Column headings	Q49_1	Q49_2	Q49_3	Q49_4	Q49_5	Q49_6	Q49_7
Coding for this example

Q50 is coded as follows:

Column headings	Q50_1	Q50_2	Q50_3	Q50_4	Q50_5	Q50_6	Q50_7	Q50_8
Coding for this example

When the data is cleaned, the responses to Q49_1-7 and Q50_1-8 (i.e. all responses to Q49 & Q50) are removed (set to blank or full stop), as the respondent selected some of 49_1-6, as well as Q50_8, and the only option selected in Q50 was Q59_8, which means it is unclear which response options are most likely to be correct for the respondent.

3.4 Dealing with demographics

Basic demographic information, including age, sex, and ethnicity of patients is included in the sample section of the data, but the 'About You' section at the end of the questionnaire also asks respondents or their parents to provide this information. In a minority of cases, the information provided from the sample frame does not correspond with that provided by the respondent themselves – for example, the sample data may identify an individual as male only for them to report being female (e.g. 12-15 questionnaire Q21=2).

Because of this, and because questions about demographics tend to produce relatively high item non-response rates, it is not appropriate to rely on either source of data alone for any kind of subgroup analyses (for example, if you wanted to examine the response to particular question by age). Where responses to demographic questions are present, it is assumed these are more likely to be accurate than sample frame information (since it is assumed that respondents are best placed to know their own sex and age). Where responses to demographic questions are missing, however, sample data are used in their place¹. To do this, we first copy all valid responses to survey demographic questions into a new variable. Where responses are missing we then copy in the relevant sample information (note that for a very small number of patients demographic information may be missing in both the sample and response sections; in such cases data must necessarily be left missing in the new variable).

Certain demographic variables require special consideration during data cleaning:

Age (Q47 0-7 questionnaire, Q17 8-11 questionnaire and Q22 12-15 questionnaire).

A common error when completing the year of birth question is for respondents to accidentally write in the current year. Such responses will be set to missing during cleaning. Out-of-range responses will also be set to missing². For the 2014 children's survey, out-of range responses are defined as Q47/Q22≤1997 or Q47/Q22≥2015.

¹ The exception to this is when response rates are calculated. Because response rates vary between demographic groups, using response and sample data to calculate response rates would create a systematic source of bias in that we are only able to amend information for the *respondents*. Therefore, only the sample information should be used to calculate response rates by demographic groups.

² The majority of out-of range responses present in data relating to year of birth questions result from errors in data entry (for example, not keying one of the digits – so '1984' may become 984, 184, 194, or 198). In such cases it is important that the responses be checked against the completed questionnaire forms, and data corrected if necessary, **prior** to submission of data to the Co-ordination Centre.

3.4 Usability and eligibility

Sometimes questionnaires are returned with only a very small number of questions completed. For the 2014 childrens survey, questionnaires where fewer than five questions have been answered are considered 'unusable'. In such cases, the responses to the few questions that have been answered will be deleted and the outcome codes will be changed from a code of 1 ('returned useable questionnaire') to a code of 6 ('questionnaire not returned'). Please note that the number of responses per questionnaire is counted after all other cleaning¹. This process should only affect a very limited number of cases, and so should not have a significant impact on response rates.

Outcome codes for respondents will also be changed if respondents are believed to be over the age of fifteen and therefore ineligible for participation. Since the sample files for the survey are checked by the Co-ordination Centre prior to mailing, this is unlikely to affect more than a handful of cases throughout the survey, as patients coded as being aged over 15 will be identified and removed from the sample before the start of the survey. However, in situations where sample information on a respondent's year of birth is missing in the final data file, and their response indicates that they are over 15 then the outcome code for that patient should be recoded from 1 ('returned completed questionnaire') to 5 ('ineligible for participation in the survey'). If data on an individual's year of birth is missing from the sampling frame, but their response to Q47/Q17 or Q22 indicates the respondent is under 16, outcome codes should remain as 1. If sample information indicates a patient is aged 15 or under, but this is contradicted by the patient's response, then the patient's survey outcome should also remain as 1. This is to avoid removing legitimate responses because of an overly conservative approach to assessing eligibility; in other words, where the patient's age is uncertain (because sample and response information contradict each other, and in different instances either of these may be accurate or inaccurate) the benefit of the doubt is given in any assessment of eligibility.

3.5 Missing responses

It is useful to be able to see the number of respondents who have missed each question for whatever reason. Responses are considered to be missing when a respondent is expected to answer a question but no response is present. For non-filtered questions, responses are expected from all respondents – thus any instance of missing data constitutes a missing response. For filtered questions, only respondents who have answered a previous routing question instructing them to go on to that filtered question or set of filtered questions are expected to give answers. Where respondents to the survey have missed a routing question, they are not expected to answer subsequent 'filtered' questions; thus only where respondents were explicitly instructed to answer filtered questions should such blank cells be coded as missing responses.

The Co-ordination Centre codes missing responses in the data with the value 999². For results to be consistent with those produced by the Co-ordination Centre, missing responses should be presented, but should not be included in the base number of respondents for percentages.

¹ Please note that the multiple choice questions, Q49 and Q50 are only counted once. So for example, even if Q50_1 and Q50_4 are crossed, this would count as only one response for the purpose of determining if a questionnaire is usable.

² This is an arbitrary value chosen because it is 'out-of-range' for all other questions on the survey.

3.6 Non-specific responses

As well as excluding missing responses from results, the Co-ordination Centre also removes non-specific responses from base numbers for percentages. The rationale for this is to facilitate easy comparison between institutions by presenting only results from those patients who felt able to give an evaluative response to questions. For Q44 in the 0-7, Q16 in the 8-11 and Q20 in the 12-15 when multiple numbers have been selected (i.e. multicode) or a non-integer has been selected (i.e. circled between two numbers) this should be coded as 98. For a full listing of 'non-specific' responses in the 2014 children's inpatient survey, please see Appendix B.

Appendix A: Example of cleaning

Incorrectly followed routing

Figure 4, below, shows hypothetical raw/uncleaned data for eight sample members, five of whom have responded to the survey (Outcome = 1).

Figure 4 – Example ‘raw’/‘uncleaned’ data for 0-7 questionnaire

Record	Outcome	Q1	Q2	Q3
Patient Record Number	Outcome of sending questionnaire (N)	Was your child’s visit to hospital planned or an emergency?	Did the hospital give you a choice of admission dates?	Did the hospital change your child’s admission date at all?
CYP14...0001	6			
CYP 14...0002	1	2	1	1
CYP 14...0003	1	1	1	1
CYP 14...0004	4			
CYP 14...0005	1	2	2	.
CYP 14...0006	6			
CYP 14...0007	1	2	1	2
CYP 14...0008	1	1	3	4

It can be seen from the data shown in Figure 4 that some of the respondents have followed filter instructions from routing questions incorrectly:

Respondents ‘CYP14...0003’ and ‘CYP14...0008’ have reported that their child’s admission to hospital was an emergency (Q1=2), but have both responded to subsequent filtered questions which are only applicable to waiting list or planned patients.

By following the cleaning instructions detailed above in Section 3.2, these inappropriate responses will be removed. Firstly, the filter instructions listed in Figure 1 specify that:

<i>if</i>	Q1 = 1	<i>then delete responses to:</i>	Q2 – Q3
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In accordance with this, all responses for Q2, and Q3 must be removed in cases where the respondent has crossed Q1=1 (‘emergency’). Looking in column Q1 of Figure 4 we can see that one respondent, ‘CYP14...0003’ has responded Q1=1, so any responses they gave to Q2 and Q3 need to be removed. This will lead to two responses being removed for respondent 3.

Figure 5 (below) shows how the data would look following cleaning by the Co-ordination Centre to remove responses to filtered questions that should have been skipped (shaded cells represent cases where responses have been removed).

Figure 5 – Example cleaned data

Record	Outcome	Q1	Q2	Q3
Patient Record Number	Outcome of sending questionnaire (N)	Was your child's visit to hospital planned or an emergency?	Did the hospital give you a choice of admission dates?	Did the hospital change your child's admission date at all?
CYP...0001	6			
CYP...0002	1	2	1	1
CYP...0003	1	1	.	.
CYP...0004	4			
CYP...0005	1	2	2	.
CYP...0006	6			
CYP 0007	1	2	1	2
CYP...0008	1	1	.	.

Appendix B: Non-specific responses

The following table lists all 'non-specific responses' included in the 2014 children's survey. Numbers in the final column indicate the response options that should be considered non-specific. Where the 'non-specific responses' column contains only a dash, the relevant question has no such response options.

0-7 Questionnaire

CORE	Question	Non-specific responses
Q1	Was your child's visit to hospital planned or an emergency?	-
Q2	Did the hospital give you a choice of admission dates?	3
Q3	Did the hospital change your child's admission date at all?	4
Q4	Did hospital staff tell you what was going to happen to your child while they were in hospital?	4
Q5	Did the ward where your child stayed have appropriate equipment or adaptations for your child?	4,5
Q6	How clean do you think the hospital room or ward was that your child was in?	-
Q7	Did you feel that your child was safe on the hospital ward?	-
Q8	Was your child given enough privacy when receiving care and treatment?	-
Q9	Did you think there were appropriate things for your child to play with on the ward?	4
Q10	Did staff play with your child at all while they were in hospital?	3,4
Q11	Did new members of staff treating your child introduce themselves?	-
Q12	Did members of staff treating your child, give you information about their care and treatment in a way that you could understand?	-
Q13	Did members of staff treating your child communicate with them in a way that your child could understand?	-
Q14	Did a member of staff agree a plan for your child's care with you?	3
Q15	Did you have confidence and trust in the members of staff treating your child?	-
Q16	Were you encouraged to be involved in decisions about your child's care and treatment?	-
Q17	Did hospital staff keep you informed about what was happening whilst your child was in hospital?	4
Q18	Did staff ask if you had any questions about your child's care?	4,5
Q19	Were you told different things by different people, which left you feeling confused?	-
Q20	Were the different members of staff caring for and treating your child aware of their medical history?	4
Q21	Did you feel that staff looking after your child knew how to care for their individual or special needs?	4
Q22	Were members of staff available when your child needed attention?	-

CORE	Question	Non-specific responses
Q23	Did the members of staff caring for your child work well together?	4
Q24	Did your child like the hospital food provided?	4
Q25	Did you have access to hot drinks facilities in the hospital?	-
Q26	Did you ever stay overnight in hospital with your child?	3,4
Q27	How would you rate the facilities for parents or carers staying overnight?	-
Q28	Did your child's condition cause them any pain when they were in hospital?	-
Q29	Do you think the hospital staff did everything they could to help ease your child's pain?	-
Q30	During their stay in hospital, did your child have an operation or procedure ?	-
Q31	Before the operation or procedure, did a member of staff explain to you what would be done during the operation or procedure?	4
Q32	Before the operation or procedure, did a member of staff answer your questions about the operation or procedure in a way you could understand?	4,5
Q33	After the operation or procedure, did someone explain to you how the operation or procedure had gone in a way you could understand?	-
Q34	Were you given any new medicines to take home with you for your child that they had not had before (including tablets and creams)?	-
Q35	Were you given enough information about how your child should use the medicine(s) (e.g. when to take it, or whether it should be taken with food)?	-
Q36	Did a member of staff give you advice about caring for your child after you went home?	4,5
Q37	Did a member of staff tell you what to do or who to talk to if you were worried about your child when you got home?	4,5
Q38	Did a member of staff tell you what would happen next after your child left hospital?	4,5
Q39	Were you given any written information (such as leaflets) about your child's condition or treatment to take home with you?	3
Q40	Do you feel that the people looking after your child listened to you?	-
Q41	Do you feel that the people looking after your child were friendly?	-
Q42	Do you feel that your child was well looked after by the hospital staff?	-

CORE	Question	Non-specific responses
Q43	Were you treated with dignity and respect by the people looking after your child?	-
Q44	Overall...	-
Q45	Is your child male or female?	-
Q46	For most of their stay in hospital what type of ward did your child stay on?	-
Q47	What is your child's year of birth?	-
Q48	Including this visit , how many times has your child stayed in hospital on a ward in the past six months?	-
Q49	Does your child have any of the following long-standing conditions?	-
Q50	Does this condition(s) cause your child difficulty with any of the following?	-
Q51	To which of these ethnic groups would you say your child belongs?	-

8-11 questionnaire

CORE	Question	Non-specific responses
Q1	When you first arrived at hospital, did people working at the hospital tell you what was going to happen to you while you were there?	4
Q2	Did you feel safe on the hospital ward?	-
Q3	Did hospital staff play with you or do any activities with you while you were in hospital?	4
Q4	Did you like the hospital food?	4
Q5	Did hospital staff talk to you about how they were going to care for you , in a way that you could understand?	4
Q6	If you had any worries, did someone at the hospital talk with you about them?	4
Q7	Were you given enough privacy when you were receiving care and treatment?	-
Q8	Did your condition ever cause you pain while you were in hospital?	-
Q9	Do you think the hospital staff did everything they could to help your pain?	-
Q10	During your time in hospital, did you have an operation or procedure (such as having your tonsils taken out)?	-
Q11	Before the operation or procedure, did hospital staff tell you what would be done ?	-
Q12	Afterwards , did someone from the hospital explain to you how the operation or procedure had gone in a way you could understand?	-
Q13	Did someone from the hospital tell you what to do or who to talk to if you were worried about anything when you got home?	4
Q14	Do you feel that the people looking after you listened to you?	-
Q15	Do you feel that the people looking after you were friendly?	-
Q16	Overall...	-

CORE	Question	Non-specific responses
Q17	Are you a boy or a girl?	-
Q18	How old are you?	-
Q19	Was your child's visit to hospital planned or an emergency?	-
Q20	Did hospital staff tell you what was going to happen to your child while they were in hospital?	4
Q21	Did the ward where your child stayed have appropriate equipment or adaptations for your child?	4,5
Q22	How clean do you think the hospital room or ward was that your child was in?	-
Q23	Did members of staff treating your child, give you information about their care and treatment in a way that you could understand?	-
Q24	Did a member of staff agree a plan for your child's care with you?	3
Q25	Did you have confidence and trust in the members of staff treating your child?	-
Q26	Were you encouraged to be involved in decisions about your child's care and treatment?	-
Q27	Did hospital staff keep you informed about what was happening whilst your child was in hospital?	4
Q28	Did staff ask if you had any questions about your child's care?	4,5
Q29	Were the different members of staff caring for and treating your child aware of their medical history?	4
Q30	Did you feel that staff looking after your child knew how to care for their individual or special needs?	4
Q31	Were members of staff available when your child needed attention?	-
Q32	Did the members of staff caring for your child work well together?	4
Q33	Did you have access to hot drinks facilities in the hospital?	-
Q34	Did you ever stay overnight in hospital with your child?	3,4
Q35	How would you rate the facilities for parents or carers staying overnight?	-
Q36	Did your child's condition cause them any pain while they were in hospital?	-
Q37	Do you think the hospital staff did everything they could to help ease your child's pain?	-
Q38	During their stay in hospital, did your child have an operation or procedure ?	-
Q39	Before the operation or procedure, did a member of staff explain to you what would be done during the operation / procedure?	4
Q40	Before the operation or procedure, did a member of staff answer your questions about the operation or procedure in a way you could understand?	4
Q41	After the operation or procedure, did someone explain to you how the operation or procedure had gone in a way you could understand?	-
Q42	Were you given any new medicines to take home with you for your child that they had not had before (including tablets and creams)?	-

CORE	Question	Non-specific responses
Q43	Were you given any information about how your child should use the medicine(s) (eg when to take it, or whether it should be taken with food)?	-
Q44	Did a staff member give you advice about caring for your child after you went home?	4,5
Q45	Did a member of staff tell you what would happen next after your child left hospital?	4,5
Q46	Were you given any written information (such as leaflets) about your child's condition or treatment to take home with you?	3
Q47	Overall...	-
Q48	Who was the main person who answered the questions in <i>the children's section</i> of the questionnaire?	-
Q49	For most of their stay in hospital what type of ward did your child stay on?	-
Q50	Including this visit , how many times has your child stayed in hospital on a ward in the past six months?	-
Q51	Which of these best describes your child's ethnic background?	-
Q52	Does your child have any of the following long-standing conditions?	-
Q53	Does this condition(s) cause your child difficulty with any of the following?	-

12-15 Questionnaire

CORE	Question	Non-specific responses
Q1	When you first arrived at hospital, did people working at the hospital tell you what was going to happen to you while you were there?	4
Q2	Did you feel safe on the hospital ward?	-
Q3	Were there enough things for someone of your age to do on the ward?	-
Q4	Did you like the hospital food?	4
Q5	Did hospital staff talk to you about how they were going to care for you in a way that you could understand?	4
Q6	Were you involved in decisions about your care and treatment?	4
Q7	If you had any worries, did someone at the hospital talk with you about them?	4
Q8	Did staff talk to each other about you as if you weren't there?	-
Q9	Were you given enough privacy when you were receiving care and treatment?	-
Q10	Did your condition ever cause you pain while you were in hospital?	-
Q11	Do you think the hospital staff did everything they could to help your pain?	-
Q12	During your time in hospital, did you have an operation or procedure (such as having your tonsils taken out)?	-
Q13	Before the operation or procedure, did hospital staff tell you what would be done ?	-

CORE	Question	Non-specific responses
Q14	Afterwards , did someone from the hospital explain to you how the operation or procedure had gone in a way you could understand?	-
Q15	Did someone from the hospital tell you what to do or who to talk to if you were worried about anything when you got home?	4
Q16	Did a member of staff tell you what would happen after you left hospital?	-
Q17	Did a member of staff give you advice on how to look after yourself after you went home?	-
Q18	Do you feel that the people looking after you listened to you?	-
Q19	Do you feel that the people looking after you were friendly?	-
Q20	Overall...	-
Q21	Are you male or female?	-
Q22	What is your year of birth?	-
Q23	Was your child's visit to hospital planned or an emergency?	-
Q24	Did hospital staff tell you what was going to happen to your child while they were in hospital?	4
Q25	Did the ward where your child stayed have appropriate equipment or adaptations for your child?	4,5
Q26	How clean do you think the hospital room or ward was that your child was in?	-
Q27	Did members of staff treating your child, give you information about their care and treatment in a way that you could understand?	-
Q28	Did a member of staff agree a plan for your child's care with you?	3
Q29	Did you have confidence and trust in the members of staff treating your child?	-
Q30	Were you encouraged to be involved in decisions about your child's care and treatment?	-
Q31	Did hospital staff keep you informed about what was happening whilst your child was in hospital?	4
Q32	Did staff ask if you had any questions about your child's care?	4, 5
Q33	Were the different members of staff caring for and treating your child aware of their medical history?	4
Q34	Did you feel that staff looking after your child knew how to care for their individual or special needs?	4
Q35	Were members of staff available when your child needed attention?	-
Q36	Did the members of staff caring for your child work well together?	4
Q37	Did you have access to hot drinks facilities in the hospital?	-
Q38	Did you ever stay overnight in hospital with your child?	3,4
Q39	How would you rate the facilities for parents or carers staying overnight?	-
Q40	Did your child's condition cause them any pain when they were in hospital?	-

CORE	Question	Non-specific responses
Q41	Do you think the hospital staff did everything they could to help ease your child's pain?	-
Q42	During their stay in hospital, did your child have an operation or procedure ?	-
Q43	Before the operation or procedure, did a member of staff explain to you what would be done during the operation / procedure?	4
Q44	Before the operation or procedure, did a member of staff answer your questions about the operation or procedure in a way you could understand?	4
Q45	After the operation or procedure, did someone explain to you how the operation or procedure had gone in a way you could understand?	-
Q46	Were you given any new medicines to take home with you for your child that they had not had before (including tablets and creams)?	-
Q47	Were you given enough information about how your child should use the medicine(s) (e.g. when to take it, or whether it should be taken with food)?	-
Q48	Did a member of staff give you advice about caring for your child after you went home?	4,5
Q49	Did a member of staff tell you what would happen next after your child left hospital?	4,5
Q50	Were you given any written information (such as leaflets) about your child's condition or treatment to take home with you?	3
Q51	Overall...	-
Q52	Who was the main person who answered the questions in <i>the young person's section</i> of the questionnaire?	-
Q53	For most of their stay in hospital what type of ward did your child stay on?	-
Q54	Including this visit , how many times has your child stayed in hospital on a ward in the past six months?	-
Q55	Which of these best describes your child's ethnic background?	-
Q56	Does your child have any of the following long-standing conditions?	-
Q57	Does this condition(s) cause your child difficulty with any of the following?	-