

Inpatient Survey 2014: Sampling Problems

1. Introduction

For the 2014 Adult Inpatient Survey all trusts were required to submit their samples to the Co-ordination Centre for final quality control checks before they were able to mail out any questionnaires. Final sampling inspection by the Co-ordination Centre was introduced for the 2006 inpatient survey and was found to be useful for identifying errors made when drawing samples and thereby helping trusts to avoid the common mistakes that can result in delays to the survey process, and problems with poor-quality samples. This document describes the errors that have been made when samples have been drawn and the recommendations made by the Co-ordination Centre to correct these. Errors are divided into major (those requiring the sample to be re-drawn or patients to be replaced) or minor (those that could be corrected before final data submission).

This document should be used by trusts and contractors to become familiar with past errors and to prevent these from recurring. If further assistance is required, please contact the Co-ordination Centre on 01865 208127.

2. Frequency of errors

This year all samples from the 154 trusts taking part in the 2014 Adult Inpatient Survey were checked by the Co-ordination Centre. In 2011, an exception was made where only in-house trust samples were checked, hence the fewer number of errors found for 2011, as shown in Table 1 below. This means that the number of errors in 2011 cannot be directly compared with other years.

In 2014 there were 9 major errors noted in the sample checking phase and the Co-ordination Centre advised nine trusts to re-draw their sample (sometimes more than once). Further to this, an additional 25 minor errors were also identified, as can be seen in Table 1.

Table 1 – Frequency of major and minor errors by survey year

	2014	2013	2012	2011 [†]	2010	2009	2008	2007	2006
Major errors	9	16	21	16	9	19	24	28	38
Minor errors	25	53	38	11	41	39	70	70	141

[†]Note that in 2011 only in-house trust samples were checked

3. Types of major error

Nine major errors were identified during sample checking in 2014, spread across nine trusts (see Table 2 below). Errors are classified as major if they require the trust to re-draw their sample, or to replace patients from the sample. If major errors are not corrected, the trust's survey data cannot be used in the Care Quality Commission's Intelligent Monitoring of NHS trusts, and the trust will be reported as not submitting data for the national survey. Table 2 below outlines the frequency of major errors by the type of error that was made. More detail about each of these errors is provided below.

Table 2 – Frequency of major errors by type of major error and survey year

Major errors	2014	2013	2012	2011[†]	2010	2009	2008	2007	2006
Incorrectly excluded by specialty code	1	8	0	0	0	0	0	2	4
Inclusion of ineligible patients (based on route of admission information)	3	3	6	6	6	5	n/a	n/a	n/a
Sampled by consecutive admission	0	1	0	2	2	3	4	2	3
Random samples	0	0	0	0	1	4	5	9	10
Sampled incorrect period	1	0	1	0	0	2	3	3	1
Screened single night stays	0	1	0	1	0	2	0	1	1
Incorrectly excluded by age	0	1	1	1	0	1	4	0	1
Zero overnight stay patients included	1	0	3	2	0	1	0	2	2
Inclusion of private patients	0	1	2	0	0	0	3	0	1
Inclusion of maternity/termination of pregnancy patients	0	0	1	2	0	0	2	8	8
Exclusion of some hospital sites	0	0	0	0	0	0	1	1	0
Inclusion of psychiatry patients	0	0	0	0	0	0	1	0	0
Misaligned sample fields	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Other (broken down for 2012 onwards):	0	0							
Exclusion of eligible patients due to mistake in query used to extract patient list	0	0	2	-	-	-	-	-	-
Exclusion of particular CCG codes	0	0	1	-	-	-	-	-	-
Inclusion of overseas patients	0	0	1	-	-	-	-	-	-
Inclusion of patients both admitted and discharged from a community hospital	0	1	1	-	-	-	-	-	-
Mismatching of names and addresses in the mailing list	0	0	1						
Exclusion of daycase patients that stayed overnight	0	0	1	-	-	-	-	-	-
<i>Total Other</i>	<i>0</i>	<i>1</i>	<i>7</i>	<i>2</i>	<i>0</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>7</i>
Total	9	16	21	16	9	19	24	28	38

[†]Note that in 2011 only in-house trust samples were checked

Incorrectly excluded by specialty code

One trust excluded eligible patients on the basis of their specialty. The trust incorrectly included patients with a main specialty codes of 501 (obstetrics) and 500 (obstetrics and gynaecology).

Inclusion of ineligible patients (based on route of admission information)

In the sample file, acute trusts are asked to include the two-digit route of admission code for each patient. This information has been required since 2009¹ and allows ineligible patients to be more easily identified and excluded.

Three trusts had patients in their sample whose ineligibility was identified by their route of admission codes (see Table 2 above). The three errors included the ineligible admission code 83 (baby born outside the Health Care Provider), 98 which is an incorrect code and another trust had excluded all patients that had not had a procedure.

In these cases trusts were informed of this issue, reminded of the eligibility criteria and asked to resubmit their sample having replaced the ineligible records.

Sampled incorrect period

The guidance strongly recommends that the trust retains the same sample month as per previous years of the survey to increase comparability of survey data. One trust sampled the incorrect month so resubmitted a sample file based on their 2013 sample month of August.

Zero overnight stay patients included

To be eligible for the survey, patients must stay for at least one night in hospital. For the purposes of this survey, this requires that their discharge date is at least one day later than their admission date. In 2014, one trust submitted a sample which included patients who had not spent a night in hospital. The trust was asked to remove these patients from the sample and replace them with eligible patients.

Misaligned sample fields

In a batch submission that affected three samples files, there were misaligned sample fields that were out of sync of the other relevant fields which would result in misaligned and incorrect data within the sample. This was rectified by a resubmission of the batch of sample files.

4. Types of minor error

Twenty five minor errors were identified during sample checking in 2014, spread across 15 trusts. Errors are considered to be minor if they can be corrected without the need for the sample to be re-drawn or for patients to be replaced. Trusts that have made minor errors are advised to make the necessary corrections to the sample information prior to submitting the final data set to the Co-ordination Centre at the close of the survey.

Table 3 (below) details the frequency of minor errors by type of minor error and survey year. More details are provided about the errors made in 2014.

¹ 2008 was the first survey year that route of admission information was requested. However, in this first year of it being asked, trusts were required to recode the information to indicate whether a patient was 'emergency' or 'planned'. Inconsistencies across trusts in the re-coding of this information led to full information on route of admission being requested in 2009.

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Table 3 – Frequency of minor errors by type of minor error and survey year

Minor problems	2014	2013	2012	2011 [†]	2010	2009	2008	2007	2006
Incorrect CCG coding	2	16	2	3	15	9	26	19	30
Missing or incorrect route of admission data	0	1	1	1	8	10	8	n/a	n/a
Incorrect ethnic or gender coding	2	9	6	1	5	7	18	12	19
Missing or incorrect treatment centre data	1	1	2	2	4	5	1	6	12
Main specialty miscoding	0	7	0	0	3	1	4	6	0
Date format used	0	0	2	1	3	0	3	6	22
Incorrectly calculated 'Length of Stay' (LOS)	0	3	6	0	3	5	9	11	15
Treatment coding used instead of main specialty	7	5	0	0	0	0	1	7	16
Other (broken down for 2012 onwards):	0								
Incorrect DoH trust code	0	2	-	-	-	-	-	-	-
Record number formatted incorrectly	10	1	5	-	-	-	-	-	-
Incorrect site of admission/discharge codes	3	8	4	-	-	-	-	-	-
Incorrect GMPC coding	0	-	10	-	-	-	-	-	-
<i>Total Other</i>	<i>13</i>	<i>11</i>	<i>19</i>	<i>3</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>3</i>	<i>27</i>
Total	25	53	38	11	41	39	70	70	141

[†]Note that in 2011 only in-house trust samples were checked

Incorrect CCG coding

Incorrect coding of the CCG billed for the patient's care was found in 2 samples submitted by trusts in 2014. The two errors detected this year were both in relation to invalid codes. In such cases, the discrepancies were queried and the codes were updated.

Incorrect ethnic or gender coding

In all survey years a number of trusts have coded ethnic group or gender incorrectly (see Table 3). In 2014, only two trusts submitted samples where ethnicity information had been incorrectly coded. Incorrect codes included the use of 'Y' or 'U'.

Treatment coding used instead of main speciality

In all instances the treatment coding was used instead of main speciality codes, seven trusts submitted codes that were treatment function codes rather than speciality codes. For example, 103 (breast surgery) or 107 (vascular surgery).

Record number formatted incorrectly

As with previous years, record numbers were required this year, in the format IP14XXXNNNN (where XXX represents Department of Health organisation code and NNNN is a unique 4-digit number, e.g. 0001, 0002, 0003 etc.). Ten trusts submitted samples with incorrect record numbers with common mistakes being IP13, number not in the format NNNN and record numbers going over the 850 sample size.

Incorrect site of admission/discharge codes

A further three trusts submitted samples containing incorrect site of admission or discharge codes, which were required to be corrected by the trusts.