

Category C Service User Survey: Pilot Report

THE CO-ORDINATION CENTRE FOR THE ACUTE
SURVEY PROGRAMME

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Contents

1	Recommendations	1
2	Timings	3
3	Sampling process	5
4	Patient Report Forms (PRF)	6
5	NSTS	8
6	Sampling	10
7	Appendix A: Pilot response rates	13

1 Recommendations

National Recommendations

The pilot survey showed that overall it was possible for trusts to follow the sampling guidance and carry out the necessary checks. However based on the findings of the pilot survey there are several recommendations for the national survey:

- The pilot survey was submitted for ethical approval to West Glasgow Ethics Committee, who decided the project did not require the approval of an ethics committee since it was not considered to be research. We recommend approaching North West MREC for approval for the main survey. The MREC has extensive experience with the national patient survey programme which should minimise delays to this process (for further detail see page 4)
- Survey leads should be informed in advance of the survey that patient report form (PRF) information will be required. Current practice regarding these records can then be reviewed in all parts of the trust and if necessary temporary measures for obtaining the information put in place (for further detail see page 6)
- Template honorary contracts should be shared with survey leads in advance, allowing at least a month for reviewing and modification if necessary (for further detail see page 5)
- Information on how to register with NSTS should be provided to survey leads at least a month in advance of the sample submission date and trusts should be advised of how long this process will take (for further detail see page 8).

Trust-level Recommendations

Further to the above recommendations, some additional discretionary recommendations emerged from the pilot survey, to be determined at trust level:

- **Pre-publicity** of the survey beyond the survey lead to front line staff: the advantage of this is the potential to improve the quality of name and address information on PRFs by informing front line staff of the survey. In certain trusts it may also be more efficient to request staff to return PRFs directly to survey leads. The disadvantage of this is that informing front line staff of the survey may alter their behaviour to patients and potentially introduce a bias into the survey. The guidance for the national patient surveys currently recommends publicising to front line staff, however the sample collection is not usually so dependent on individuals (for further detail see page 10)
- **Sample size:** after 8 – 10 weeks in field the pilot survey response rates started to tail off (see appendix A), with an adjusted response rate of 49%¹ (non adjusted rate = 46%), this is in line with other

¹ The adjusted response rate is calculated once undelivered questionnaires and deceased/ineligible patients are removed.

national patient surveys². Although it would be preferable to increase the sample size beyond 850 to achieve 500 usable responses per trust, due to the complex and time consuming process of gathering sample information, the costs of this would outweigh the benefits. However if individual trusts wish to make comparisons between different areas within the trust, or to perform analysis by particular groups such as respondents receiving 'telephone advice only', they may choose to 'boost' their sample to obtain sufficient numbers

- **Sampling period:** most trusts will need to collect PRFs and enter data manually, therefore they would find it easiest to sample the shortest period possible to increase the amount of time available for data entry. While the largest trust (London) receives almost 4,000 Category C calls per week, the smallest receives fewer than 500 (Great Western)³. Hence the minimum period required, for an 850 sample, will vary between one week and three weeks. That said, there was some variation in the number of records removed by each pilot trust when applying exclusion criteria to the sample. Therefore the number of records necessary for a final sample of 850 may differ between trusts depending on the quality of information recorded⁴. In addition many trusts only collate PRFs and other call information at the end of the month. Therefore it is recommended that the sampling period span one calendar month, with the option to extend into the previous month if insufficient records are available (for further detail see page 10).

² Over ~ 12 weeks, the 2007 Inpatient Survey response rate was 54% and the 2008 PCT survey achieved 40% over a similar time scale.

³ Figures are based on information provided by ambulance trusts to the Healthcare Commission Category C review, and relates to calls made in February 2007.

⁴ Information on the number of records removed when applying exclusion criteria can be collected from trusts and used to assess the representativeness of the sample (as in the 2004 Ambulance Emergency and Urgent Services Survey).

2 Timings

The pilot timetable allowed approximately six weeks (from the end of proposed two week sampling period) for delivery of the completed sample file to the Co-ordination Centre. Although all trusts took longer than expected to provide the sample information, the process of sample collection was possible within 6 weeks;

1. A couple of days for downloading information from call records⁵, randomised sampling and applying exclusion criteria
2. A couple of weeks for collecting PRFs, selecting correct PRFs and manual data entry⁶
3. A further couple of days for checking and verification of sample before sending to the Co-ordination Centre.

To allow a similar timeframe for the national survey, we suggest that patients recruited for the sample will have called the ambulance service during July 2008 (although for trusts who think sampling will require more than one month's records, part of June could also be included).

Information for Trusts

Set up and tracing through NSTS took longer than expected and this delayed the mail out for both Trust B and Trust C. In Trust A, delays to the start of the sample collection were caused by legal negotiations and also led to delays in the mail out (Trust A sample drawn from calls between 21st Jan – 3rd Feb, two weeks later than Trust B and C). Therefore information on both the honorary contract arrangement and NSTS registration and submission need to be provided further in advance.

It is essential for PRF information to be collected and for names and addresses to be recorded and retained by front line staff. Although it is necessary to collect the sample retrospectively, advance warning needs to be given to trusts, prior to the sampling period, to allow them to investigate PRF collection procedures throughout the trust (particularly trusts that merged in 2006) and if necessary introduce temporary measures during the sampling period. For example, notifying ambulance stations in advance of the survey sampling period so they can ensure PRFs are collected and returned in a timely fashion. Front line staff can also be requested to fill in PRFs with as much information as possible during the survey period. **Note: For trusts to contact front-line staff in advance (i.e. prior to the July / late June sampling period) a bulletin will need to go out in mid June.**

⁵ Downloading of computerised call records information required the expertise of someone from the IT or Information Management department

⁶ As in the separate, earlier pilot sampling exercise, estimates of sampling time were around 1 week per 200 records. For larger samples this estimate is conservative since time needed for step 1 remains the same regardless of the number of records.

Provisional timetable for trusts

	Action	Date due
Prior to ethical approval	Publicise survey to front line staff	Mid June
	Notify the Co-ordination Centre the details of 2 survey contacts	w/c 23 rd June
	Registration with NSTS (for trusts not already signed up)	w/c 30 th June
	Provide example honorary contracts to trusts	w/c 30 th June
	Guidance and other survey documentation published on www.nhssurveys.org	w/c 18 th August
	Draw sample of 850 eligible service users and carry out necessary checks	August - September
	Submit anonymised sample for checking to Co-ordination Centre before starting mailing process	w/c 15 th September - 8 th October
	Commence fieldwork	Mid September

Note: in this timetable, publicity of the survey to front line staff necessarily comes before receiving ethical approval. If ethical approval is denied or delayed and the dates for the survey are in turn pushed back, publicity will already have gone ahead and, in some trusts, efforts for better completion of PRF information and return of PRFs to survey leads will be for the wrong sample period. For this reason we strongly recommend approaching the North West MREC which has extensive experience with the patient survey programme and we hope this will minimise delays to the process.

3 Sampling process

Patient identifiable data

The national survey programmes operate using an honorary contract scheme. Trusts draw a sample of patients from their records, then opt to either mail out the questionnaires themselves, or to set up contract agreements with their survey contractor. This allows for the legal transfer of names and addresses to named individuals at the survey contractor, for the mailout. The Healthcare Commission has developed template contracts for trusts to use, though recommend that these are reviewed and adapted by individual trusts where appropriate, in accordance with trust policy and requirements. More information about the honorary contract scheme is available on the website at <http://www.nhssurveys.org/surveys/356>

For the purposes of the pilot, and to minimise the burden on ambulance trusts, the Co-ordination Centre planned to mail out all questionnaires under honorary contracts.

Trust A was unwilling to release patient identifiable data (specifically names and addresses) to the Co-ordination Centre without either (i) patient consent prior to the mailing of a questionnaire or (ii) submission to the Patient Information Advisory Group (PIAG) for Section 60 approval⁷. These options were not feasible for this survey because:

- Ethical approval for the patient survey programme operates on an opt-out basis; changing to opt-in methodology could set a precedent for future surveys and would make all previous year-on-year results incomparable. Research evidence suggests that it would also reduce response rates to the survey significantly
- The Healthcare Commission has agreed with PIAG that Section 60 approval is not required for national surveys of this type. Even if approval were sought, this would not be possible without major delay to the timing of the survey.

Instead, the trust agreed to mail out questionnaires themselves and to remove all patient name and address information from the sample file sent to the Co-ordination Centre. This process is already included in the guidance manuals for other national patient surveys.

KEY LEARNINGS:

- *There are **two** viable options for handling patient identifiable data; an honorary contract signed by all staff outside the trust who will have access to the data or survey mailing by the trust.*

⁷ Section 60 of the Health and Social Care Act allows the common law duty of confidentiality to be set aside if it is not possible to gain patient consent or to use anonymised data 'having regard to the cost and technology available'. Approval under Section 60 is granted by PIAG on behalf of the Secretary of State for Health. Approval under Section 60 means that the successful applicants have legal support for their project and no breach of confidence is involved in disclosing specified information for the approved purpose.

Honorary contracts

Trust B and Trust C signed an honorary contract for each staff member accessing the sample information, using the Healthcare Commission's template for the NHS Patient Survey programme. Although no patient identifiable data was released from Trust A, they had their own contract (covering the roles and responsibilities of the parties involved, and issues such as intellectual property and licence) which required some negotiation with the Co-ordination Centre before it could be exchanged. This process lasted approximately one month, from the end of February to the signing of the final contract at the end of March.

As other trusts may want to negotiate the details within the honorary contracts for the national survey, or use their own versions, sufficient time will have to be allowed for trusts' legal departments to review the arrangements and to make any changes to the template honorary contracts provided by the Co-ordination Centre. We suggest sending these documents to trusts prior to publishing the full guidance.

KEY LEARNINGS:

- *Template honorary contracts should be shared with trusts in advance of the survey to allow plenty of time for reviewing and modification.*

4 Patient Report Forms (PRF)

Collection

All three pilot trusts had a system by which PRFs were returned to trust headquarters and entered into a central computer system, from which the information for the pilot survey could be retrieved. At Trust B at the time of the pilot, there was a backlog of PRFs waiting to be scanned and these could not be cleared in time to access these PRFs centrally when drawing the sample. Instead, all stations were requested to set aside PRFs for category C patients and provide these directly to the survey lead during the two week sampling period. Due to the sensitive information contained in PRFs (requiring secure mailing or couriers) the survey lead (and colleagues) visited stations *in person* to collect these where station staff did not come into HQ to deliver them.

Trust B was formed from the merger of three ambulance trusts in 2006. Anecdotally, two of these former trusts had more frequent communication with trust headquarters and responded quickly to providing the PRFs to the survey lead. In the remaining area, with less direct contact with HQ, there was a greater delay in getting the required PRFs. The full sample was drawn from each of the three Trust B centres within the six week deadline for delivery of the pilot sample to the Co-ordination Centre.

Recording address information

In 2006 Trust C was formed from the merger of three ambulance trusts. Although in initial discussions Trust C was confident that their data systems met the requirements of the pilot survey, during sample collection it emerged that part of Trust C, previously a separate trust, still operated a different system to the rest of the trust. Here, completed PRFs were not kept for trust records but given either to the hospital (if the patient was transferred to hospital) or to the patient (if the patient was not conveyed). One section of the PRF was kept for trust records. However this did not have the all the information required for the pilot sample, in particular the patient's full name and home address.

One of the exclusion criteria for the sample was any records without a valid name and home address for mailing. Therefore, for the pilot, it was not possible to include *any* patients from this area since the lack of accurate name and address information did not meet the sampling criteria. The resulting deficit in patient numbers for Trust C's pilot sample was made up by the remaining two centres of this trust.

Trust C is currently in the process of aligning its systems and hope to have completed this in time for the national survey.

Implications of PRF delays or missing records

The PRFs have proven critical for the sampling and mailing of questionnaires for the Category C pilot survey. **Advance notice of the use of these documents will need to be provided to all trusts and they will need to immediately advise the Co-ordination Centre of any expected delays or missing documentation at any of their centres.**

As shown in the previous two cases, delay in entering the data is likely to be the lesser issue and temporary arrangements could be made to provide this information. The Co-ordination Centre can advise trusts on some alternate methods. However, if one or more centre in a trust is missing documentation for patients, it is likely this would exclude that centre from participating in the mailed survey and thus bias the results for this trust. The importance of PRFs for the survey will be stressed in initial contact with the ambulance trusts.

KEY LEARNINGS:

- *There are still differences in procedures within trusts that merged in 2006, with some previous trusts headquarters still working fairly independently. The guidance will need to highlight that trusts must ensure all areas are covered by the survey.*
- *It is essential for PRF information to be collected, and for names and addresses to be recorded and retained by front line staff, so current practise regarding these records need to be investigated in all areas of the trust and, if necessary, procedures temporarily modified.*
- *It may be necessary for trusts survey leads to appoint a contact in each part of the trust, who will be responsible for sampling in their area. The Co-ordination Centre will need to discuss this with each trust in early communications.*

5 NSTS

NSTS Set up

Trust B and Trust C had not used the NHS Strategic Tracing Service (NSTS) previously and the process of setting this up took longer than these trusts expected. According to NSTS, it can take up to a month to set up as a new registered user. After this NSTS can set up the PKI service (Public Key Infrastructure; allowing batch tracing via secure uplink (SSL)), returning a checked sample in a matter of hours. There are additional requirements for the PKI service which makes trusts perceive that this process takes longer than simply mailing the data (i.e. setting up of a second email address, etc). Trust C recommended allowing trusts in the national survey a period of two months to register with NSTS and to set up PKI. There are three remaining ambulance trusts not registered with NSTS and these are:

- Great Western Ambulance Service
- North West Ambulance Service
- South East Coast Ambulance Service.

Although Trust B was certain that they were registered, NSTS could not find a record of this and they were required to register again. To set up NSTS, the Caldicott Guardian must first register the trust before the survey lead can take on responsibility as the designated batch trace user. This first step took Trust B a considerable amount of time⁸ and precluded it from mailing out in time for the pilot survey deadline.

NSTS Tracing

There are currently two ways to send data to NSTS:

- PKI (email) which has a 24 hour turn around
- SLA (postal) which has a maximum 3 day turn around. Adding on time taken for postage, this is approximately 5 working days.

Trust C chose to send their sample file to NSTS by post as they were not already set up with PKI and felt arranging this would take longer. Trust A had NSTS 'super users' who were able to access the system and do their own NSTS traces. Therefore Trust A's sample did not have to be sent to NSTS, but did need to be sent to a super user as only the registered super users were able to do this tracing.

Trust C had their first submission to NSTS rejected as it was not in the correct format. This is a frequent cause of delays in the acute and primary care national patient survey programmes. The file was passed to the trust's IT department for further processing before it could be returned to NSTS. As Trust C submitted this sample by mail, this delayed the checks further. The second submission was traced successfully. However, it was returned in a different file format, one that the trust did not recognise. There were additional delays due to the difficulty in opening the data file.

⁸ Guidance on registering with NSTS was first provided to trusts on the 14/1/2008.

KEY LEARNINGS:

- *AT LEAST a month is needed for NSTS registration; so to avoid delays to fieldwork trusts will need to start the process in July 2008 ready to submit sample to the Co-ordination Centre for checking in September 2008. (The Co-ordination Centre will need to inform the relevant trusts of this in the first week of July).*
- *NSTS registration requires the involvement of the Caldicott Guardian; so this person's time needs to be taken into consideration when planning.*
- *AT LEAST a week is needed for NSTS tracing, to avoid delays. (This can be reduced by using PKI.)*
- *Formatting the sample file for NSTS requires technical knowledge and trusts with little or no experience may have difficulty complying with the data requirements. Some trusts may want to ask their IT department to do the formatting; so this time also needs to be taken into consideration when planning.*
- *The Co-ordination Centre will seek to provide a successful template from one of the pilot trusts for the purposes of the main survey; this should reduce or eliminate files rejected on the basis of format.*

6 Sampling

Selecting a random sample

After selecting the random sample both Trust B and Trust C had to return to their initial set of call records (from the 2 week sampling period) to get a final sample of 400 records. This was due to the number of records removed during the sampling checks (the majority of excluded records were removed because of insufficient address information or because they were duplicate calls). Both trusts felt they would need to take a larger random sample initially to prevent this.

Telephone advice only callers

In Trust A, records of callers receiving telephone advice only (i.e. no on-scene response) were kept on a separate system and were not included in the collection of call data which the trust currently undertakes as part of its management information system. Therefore, this group had to be sampled separately, as a proportion of total calls during the sampling period (approx. 17% of all Category C calls).

Sampling errors

Classification of Incident

Trusts provided information on the classification of incident as requested. This information allows analysis to be performed by type of incident (which may be desirable since assistance provided to callers is based on their allocation through AMPDS). Trust C initially omitted to provide the full AMPDS (Advanced Medical Priority Dispatch System) code in the 'Classification of Incident' column, providing only part of the code i.e. 'GREEN'. 'GREEN' is part of the AMPDS code indicating a Category C incident; this was what was used in the management information which had been provided to build the sample. The trust was able to return to the data and get the full AMPDS code from the call information.

Address

In Trust B, the sample address data was not correctly split over 5 columns. Some of the addresses did not appear to be residential addresses, for example; University Campus addresses, Community Centres or Shopping Centres.

Trust B had a disproportionate number of this type of address compared with Trust C (no address information was available from Trust A for comparison). Further investigation revealed that Trust C (and Trust A) had identified and removed this type of address as part of their sample verification process. Although no explicit instructions were given to trusts to exclude non residential addresses, the guidance stating that records without a valid postal address should be excluded (records with "insufficient name or address information for the questionnaire to have a reasonable chance of being delivered") was interpreted differently. Including an exclusion criteria for

non residential addresses in the national survey will require subjective judgement calls from trust staff compiling the sample.

Postcode

Around a quarter (103) of the records from Trust C had incomplete postcode data. Trusts A and B had full postcodes for all records. Trust A successfully conducted a 'postcode look up' on all records with missing postcode information which identified and returned all missing postcodes. Trust B publicised the survey to staff before collecting the sample information. Both Trust B and Trust C felt that for the national survey, the quality of the sample information could be improved by requesting front line staff to fill in PRFs as fully as possible, in particular postcode (and job number).

Age / Date of Birth (DOB)

Trusts provided both date of birth and age information as requested, as this allows for further analyses and the tracking of response rates by subgroup. Age in years is almost always recorded from callers (although since this information is from the caller and not the patient this may be an approximation rather than exact age), whereas DOB is recorded later on PRFs. Previous discussions with trusts suggested that DOB was not always recorded whereas age in years was. (In the pilot sample both were provided for 99% of records).

Age and DOB did not always match (around 14% of records had inconsistent age and DOB), the majority of inconsistencies were within two years of each other, but for around 3% there was more than two years difference. E.g. DOB: 01/02/1916 (92) and Age: 45. Some of these errors seemed to be due to manual data entry of DOB information, but others could be due to difficulty reading the PRF, or errors at the generation of the sample etc.

Table 1: Summary statistics of difference (in years) between DOB (age as calculated from date of birth) and age in years

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Difference in years between DOB and age	1196	77.00	-47.00	30.00	-.2232	3.52367

Whilst date of birth is likely to be most accurate (since age from call information could be an estimate made by someone calling on the patients behalf) due to concerns about the completeness of date of birth information it will be worthwhile asking for both for the national survey sample.

Ethnicity

Ethnicity is routinely collected, where available, during the sampling in order to analyse responses and response rates by ethnic group. Trust C had a large proportion of ethnic category Z, further investigation revealed that they had incorrectly used the Z (not stated) code for cases where ethnicity was not known. Taking this into account, Trust C was only able to provide ethnic category information for 2% of sample records. Trust B was not able to

provide any ethnicity information at all. Only Trust A was able to provide ethnicity information for a significant number of its sample records (59%). Conversations with ambulance service staff suggest collecting ethnic category of patients is a low priority.

Response Time

Trusts provided objective information on response time to help with analysis of respondents' answers about their experiences of this. Trust B and Trust C provided response time in minutes. Trust A provided response time as the time of day the response was, the actual response time was then calculated at the Co-ordination Centre by subtracting this from the time of call. To reduce chance of errors or formatting inconsistencies between trusts the guidance for the national survey will request this information in discrete columns for hours and minutes.

Hospital code

As additional information Trust A provided the code of the hospital the patient was taken to. If there is interest at the Department of Health or Healthcare Commission, we could investigate requesting this data for the national survey.

KEY LEARNINGS:

- *Information collected as part of existing management information systems can help with the sampling process, but trusts should be aware of things that might not be included in the management information and how else these can be collected.*
- *Features of these systems must not be allowed to introduce bias into the sample, for example by excluding particular groups of service users.*
- *Both age and date of birth should be requested as part of the sample information, where these do not match it is likely that the date of birth is most accurate.*

7 Appendix A: Pilot response rates

Figure 1: Weekly response rates by trust

