



**Survey  
Coordination  
Centre**

# URGENT AND EMERGENCY CARE SURVEY 2020: SAMPLING ERRORS REPORT

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## Updates

Before using this document, please check that you have the latest version, as small amendments are made from time to time (the date of the last update is on the front page). In the unlikely event that there are any major changes, we will email all trust contacts and contractors directly to inform them of the change.

This document is available from the NHS Surveys [website](http://www.nhssurveys.org).

## Questions and comments

If you have any questions or concerns regarding this document, please contact the [Survey Coordination Centre](mailto:team@surveycoordination.com).

# 1. Introduction

Sample files for all 126 trusts participating in the 2020 Urgent and Emergency Care Survey (UEC20) were submitted to the Survey Coordination Centre for Existing Methods (SCCEM) for final quality control checks before mailing to patients could begin. This included the trust's sample declaration form and sample data, with the latter being password protected and uploaded to the SCCEM's secure file transfer site. A checklist was also submitted by contractors and in-house trusts which outlined the checks that had been conducted on the sample files.

Data inspections were undertaken by the SCCEM to check that trusts had drawn samples correctly according to the sampling criteria, to aid trusts in avoiding common errors prior to fieldwork commencing. It is important that errors are identified as they can lead to delays in the survey process and/or poor data quality. Such errors are flagged to the trust in order to help them avoid these types of errors in future iterations of the survey.

This report gives a summary of the errors found during the course of the sample checking conducted by the SCCEM. It is worth noting that it only gives details of the major, minor and historical errors found by the SCCEM; many samples may have contained further errors which would have been identified and corrected during checks by their trust-appointed contractor, if the trust used one. For the UEC20 survey, 125 of the 126 trusts had a trust-appointed contractor.

Four types of error were identified by the SCCEM during the sample drawing and submission processing, including:

- **Major errors** – errors that require the sample to be redrawn, commonly where ineligible patients have been included or eligible patients have been excluded from the eligible population and/or drawn sample.
- **Minor errors** – errors that do not require the sample to be redrawn, but instead require amendments to be made to the sample data;
- **Historical errors** – errors relating to a trust's previous survey sample submission(s). These errors might come to light during checks of their 2020 sample and therefore cannot be corrected. Depending on the nature of the historical error, it may not be possible to provide historical data comparisons for the trust in question during the reporting stage of the survey.
- **Section 251 breaches** – these are failures to adhere to the stated processes which give the survey approval for the common law duty of confidentiality to be put aside.

Trusts and contractors should use this document to become familiar with previous errors in order to prevent them from recurring in future survey years.

## 2. Frequency of Errors

During the UEC20 sample checking process, the SCCEM detected seven major errors, 42 minor errors, 3 historical errors and 0 Section 251 breaches, however 2 process breaches were recorded (see figure 1).

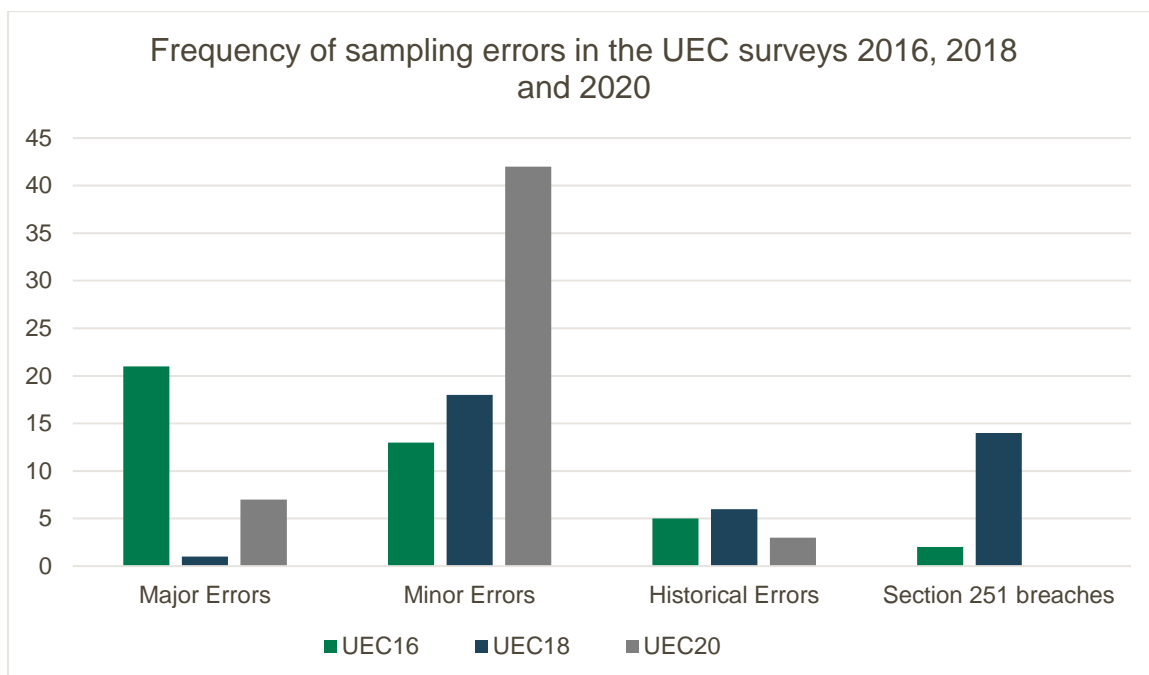


Figure 1. Frequency of errors in the UEC20 sampling

### 3. Major Errors

Major errors tend to take the form when either extract logic being incorrectly scripted when drawing the eligible population or misunderstanding the survey's eligibility criteria. As with previous iterations of the survey, the sampling frame for UEC20 across both Type 1 and Type 3 was attendances from 1<sup>st</sup> September and 30<sup>th</sup> September 2020. However, the Type 3 sample could include August attendances if the trust did not have the minimum number of eligible attendances in September 2020 alone. All samples should follow the instructions published by the SCCEM<sup>1</sup>.

In total, there were seven individual major errors identified by the SCCEM during sample checking for UEC20 that resulted in six trusts having to redraw their sample.

Below are details of each major error:

- One trust drew their sample incorrectly as their Type 1 sample included patients who attended the emergency department in August and September 2020. This resulted in the trust including ineligible patients, as their sample should have only included Type 1 patients who attended in September 2020. The trust had to redraw their sample, and it was rectified for their second submission.
- One trust sampled back into August incorrectly for their Type 3 sample. Instead of sampling back consecutively until they reached the required 420 sample size, they sampled back to 1<sup>st</sup> August 2020 to include all August attendances. The trust had to redraw their sample, and it was rectified for their second submission.

<sup>1</sup> UEC20 sampling instructions provided by the SCCEM can be found here: <https://nhssurveys.org/wp-content/surveys/03-urgent-emergency-care/03-instructions-guidance/2020/Sampling%20instructions.pdf>

- One trust incorrectly included attendances only up to 29<sup>th</sup> September 2020 instead of 30<sup>th</sup> September 2020 in their sample. The trust had to redraw their sample, and it was rectified for their second submission.
- It is noted within the sample criteria that Type 3 departments are only eligible if they are wholly managed by the NHS trust. One trust had incorrectly included attendances at a Type 3 department which is not fully managed by their trust. This resulted in the trust including ineligible patients. The trust had to redraw their sample, excluding patients from this Type 3 department, and it was rectified for their second submission.
- One of the variables submitted in the UEC sample is time of attendance. While checking a trusts sample the SCCEM noticed 81% of their sample included attendances between 01:00 and 04:00. It would be expected to see a proportion of patients attending A&E throughout a 24 hour period, with peak number of attendances typically between 09:00 and 21:00. The trust resampled, and the error was rectified in their second submission.
- Another trust also made an error with the time of attendance variable, submitting a sample where the time 02:00 was recorded for all attendances. The trust confirmed that there had been error in data entry, and resubmitted their sample with the correct times of attendance.

Within the sampling instructions it states that patients who are in hospital at the time of drawing the sample should be excluded, this is so we can avoid sending questionnaires to people who are currently inpatients. However, one trust had included current inpatients within their sample, which made up 4% of their sample. This error was identified during fieldwork and therefore the error was not rectified. It was noted by the trust that all patients had been discharged by the time the first mailing of questionnaires were sent.

## 4. Minor errors

In total, there were 42 minor errors that occurred during the sampling for the UEC20 survey. The vast majority of these errors were in regards to the Clinical Commissioning Group (CCG) codes and the format of the 'Time of Attendance' variable. Please see table 1.

| Frequency of minor errors  |           |
|--|-----------|
| Type of error  | Frequency |
| CCG coding errors (including old codes, invalid codes, regional codes and unknown codes) | 24        |
| Time of attendance format  | 11        |
| Mobile phone indicator incorrectly coded   | 2         |
| Incorrect site code  | 2         |
| Incorrect trust code   | 1         |
| Patient Record Number format   | 1         |
| Gender variable incorrectly coded  | 1         |

Table 1. Frequency of minor errors in the UEC20 sampling

## 4.1. CCG codes

Several CCGs recently merged and the new CCG codes went into effect on 1<sup>st</sup> April 2020. Due to the changes in CCG, many trusts submitted sample files with the older CCGs instead of the new ones. In total, there were 13 trusts that submitted a sample with incorrect, old CCG codes, making up a third of all minor errors.

Three trusts included invalid CCG codes (as opposed to old valid CCG codes). The trusts provided the correct codes and their samples were amended by the trust, the contractor, and the SCCEM.

Four trusts included region codes/overseas codes for some of the records in their sample. The trusts provided the correct codes and their samples were amended by the trust and the contractor.

Four trusts did not code unknown CCG codes correctly. The trusts corrected this and resubmitted with the correct code for unknown CCG codes.

## 4.2. Time of attendance

Eleven trusts submitted a sample where the time of attendance variable was not in the correct format (HH:MM). Some trusts had included the time of attendance in the format HH:MM:SS, while others used a 12 hour time format with AM or PM indicator. The trusts corrected the format and their samples were amended by the contractor.

## 4.3. Mobile phone indicator

Two trusts did not extract the mobile phone indicator correctly. This was flagged by the SCCEM while conducting sample checks due to the small proportion of mobile numbers held for patients and a high proportion of 'unsure'. The trusts had only indicated they held a mobile phone number for a patient if they held a mobile phone number and the patient had explicitly given consent for their mobile phone number to be used. However, the consent field was not routinely used by staff at both trusts. The trusts resubmitted the sample with the correctly coded mobile phone indicator, to indicate all patients with a mobile number.

## 4.4. Site code

One trust had included a site code in their sample which was different to the site code used in historic samples. The trust confirmed the site code submitted in the 2020 sample was incorrect, and the trust amended their data to include the correct site code.

One trust mistakenly coded an incorrect site for one patient. This was flagged as it was the only patient coded at this site and the trust had informed us that this site had closed due to COVID-19. The trust confirmed this was a data quality issue and the correct site was inputted.

## 4.5. Trust code

One trust had included an incorrect trust code in their sample, where the value '0' was switched with the letter 'O'. The trust confirmed this was incorrect, and the trust amended their data to the correct trust code.

## 4.6. Patient record number

One trust did not submit the patient record numbers in the correct format. Instead of including 5 digits, some of the record numbers only had 4 digits. The numbers were amended and resubmitted in the correct format.

## 4.7. Gender variable

One trust had incorrectly coded a patient's gender as 3 instead of 9, because the patient identified as non-binary. The trust and contractors amended the code to 9.

# 5. Historical errors

The sample checking process carried out by the SCCEM involves comparing the trust's current sample data to previous year's sample data 2018 and 2016. This is for two reasons: 1) to ensure the sample has been drawn correctly; and 2) to ensure historical comparisons can be made in the analyses. On occasion, these checks can uncover errors made during previous survey iterations that had gone unnoticed despite the checks completed in previous years. Three such errors were identified during the UEC20 sample checking process.

When such errors are discovered this means that the 2020 trust results may not be comparable to historic data, however this will be explored during bespoke analysis once the 2020 response data has been submitted.

- In 2018, one trust's Type 3 sample only included August attendances due to a system crash at the trust. The Type 3 sample should include attendances from September with August attendances only included if the required sample size is not achieved with September attendances alone. The 2020 Type 3 sample consists of patients who attended in September 2020 only, the trust did not need to sample into August 2020. While the 2018 sample had been approved by the SCCEM, this could potentially affect historical comparability to 2020 data as age and ethnicity proportions had shifted in 2020 when compared to 2018.
- In 2018, one trust sampled Type 1 attendances only from 1<sup>st</sup> to 21<sup>st</sup> September due to IT issues which lead to difficulties when drawing their sample, Type 1 samples should include attendances up to the 30<sup>th</sup> September. This had been approved by the SCCEM in 2018. However, historical comparisons made to 2020 data could be affected, as gender proportions had shifted significantly with 2020 proportions aligning to those reported in the 2016 sample.
- While checking the 2020 samples, an historical error in relation to the site codes used in the 2018 sample was found. It was identified that a trust had included an incorrect site code within their Type 1 2018 sample in error. While the site code provided for these patients was incorrect, the actual services provided by this site did not change between 2018 and 2020. The trust noted they were unaware two sites codes were being used for different services provided at the same site. The site code has been corrected in 2020.

## 6. Section 251 breaches

Approval for UEC20 was sought and gained under Section 251 of the NHS Act 2006. This approval allows the common law duty of confidentiality to be put aside for the processing of patient identifiable data without active consent. Any breaches of the terms and conditions of Section 251 approval are immediately communicated to the CQC, who in turn, notify the Confidentiality Advisory Group (CAG) of the breach in question.

No such breaches occurred during sample checking for UEC20. However, one Section 251 process breach occurred where the procedures laid out in the Section 251 application for UEC20 were not adhered to.

- The SCCEM was sent a Sample Declaration Form which was labelled as one NHS trust when the contents of the form was for a different NHS trust. The SCCEM flagged this to the contractor immediately and the corrected form was provided. The sample was only checked once the correct Sample Declaration Form had been received and approved.

## 7. Attribution file

In the UEC20 survey, NHS trusts were also asked to submit an attribution file, in order for the CQC and the SCCEM to conduct additional analysis on whether patients were on a Same Day Emergency Care (SDEC) pathway and whether patients were streamed into a COVID-19 cohort area. A consultation with NHS trusts during spring 2020 showed that these variables might not be available at the time of initial sampling (October), therefore, NHS trusts were asked to submit them separately as part of an attribution file. This submission was optional as we were made aware during the consultation period that this data may not be available across all NHS trusts. Trusts submitted their attribution files between January and March 2021.

30 out of 126 NHS trusts submitted an attribution file. The file was password protected and uploaded to the SCCEM's file transfer site. The file included; Trust code, Patient Record Number (so these variables could be linked back to their sample file), SDEC indicator and COVID-19 stream indicator. The SCCEM will merge the sample and attribution files during data analysis.

The attribution file was reviewed by the SCCEM to ensure the Patient Record Numbers in the file matched those within the trusts sample file. Additionally, checks were conducted on the SDEC and COVID-19 variables to ensure these had been coded as per the sampling instructions. Below details a summary of the errors found during the course of checking the attribution files.

### 7.1. Minor errors

Five minor errors were identified while checking the attribution files.

Two NHS trusts had included duplicate Patient Record Numbers in their attribution file. These were flagged by the SCCEM while completing checks. The trusts removed the duplicate records and resubmitted their file.



One NHS trust had coded the COVID-19 stream indicator variable incorrectly. The trust had included a code of '2' instead of '0' to indicate patients who were not treated in COVID-19 stream. This was amended and the file was resubmitted.

Another NHS trust had formatted the Patient Record Numbers incorrectly, formatting them to include only 3 digits, when the Patient Record Numbers in the main sample are formatted to include 5 digits. The record numbers were amended to match their sample file and their attribution file was resubmitted.

Lastly, one NHS trust had provided data for all patients included within their initial sample file, pre deceased checks, before their Type 1 sample file was reduced to the final sample size of 1250 patients. This was flagged while the SCCEM were running checks, as their file included an additional 256 records, when compared to their final Type 1 sample. These records were removed and their attribution file was resubmitted.

## 7.2. Section 251 breaches

No Section 251 data breaches occurred during the submission of attribution files for UEC20. However, one Section 251 process breach occurred where the procedures laid out in the Section 251 application for UEC20 were not adhered to.

- One trust submitted their attribution file to the SCCEM via email in a document which was not password-protected instead of submitting a password-protected file via the SCCEM's secure site. This email was deleted and the trust then submitted the password-protected file via the secure site. It should be noted that this file did not contain any patient identifiable data.