Survey Design

Data Sources
The samples are drawn in different ways for each survey, depending on the scope and design of each one. The sampling method and process are described in more details in the technical reports that accompany each set of survey results.

Four data sources are used to obtain the samples for the Care Experience Surveys:

1. **Community Health Index (CHI)** – An NHS Scotland database containing non-clinical demographic information about every patient registered with a General Practice in Scotland. This database is maintained by NHS National Services Scotland (NSS) and Atos Origin Alliance on behalf of each Scottish NHS Board.

2. **National Health Service Central Register (NHS CR)** – Contains basic demographic details of everyone who was born, or has died, in Scotland plus anyone else who is (or has been) registered with a General Practice in Scotland.

3. **Scottish Morbidity Record for General/Acute Inpatient and Day Case Activity (SMR01)** – Contains personal information about every patient who had a hospital inpatient or day case discharge from NHS hospitals in Scotland. Submissions are made by each NHS Board. The central database is maintained by NSS.

4. **Scottish Cancer Registry (SMR06)** – Contains personal information about every Cancer patient resident in Scotland. Notifications of Cancer registrations are received from a variety of sources including hospital inpatient records (SMR01) and the National Records for Scotland. The central database is maintained by NSS.

Deceased Checks
Individuals registered as deceased according to National Records for Scotland (NRS) Death Records are removed at the time of sampling. The delay between the sample being drawn and the survey being mailed out means there is a possibility that some of the sampled individuals will have died between these two dates.

To minimise the risk of questionnaires being sent to deceased individuals, a list of those sampled is sent to NHS CR who run checks against their database. Up-to-date checks are also made against the CHI database to identify informal notifications of death. These checks are done as close as possible to each survey mail-out, usually overnight before the day of each mail-out, so that survey packs intended for individuals identified as deceased can be removed.

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Survey Results

As results for the Care Experience Surveys are based on a survey of sampled individuals, and not the complete population of Scotland, the results will be affected by sampling error. More information on sampling design for each survey can be found in the technical report that accompanies the results for each survey.

The effect of this sampling error is relatively small for the national estimates. However, when comparisons have been made in the analysis of the survey results, the effects of sampling error have been taken into account by the use of confidence intervals and tests for statistical significance. Only differences that are statistically significant are reported as differences within the analysis and all significance testing is carried out at the 5% level, giving 95% confidence.

More information on confidence intervals, significance testing and how they’re calculated can be found at: http://www.gov.scot/Resource/0052/00522932.pdf.

The majority of the survey results are given as percentage positive values – the percentage of people who have answered the question in a positive way. This type of results is used for reporting as it allows easier comparisons to be made, rather than reporting on each response option individually. The positive and negative classification for the answers to the survey questions are described in more detail in the technical reports that accompany each set of survey results.

Survey Bias

The greatest source of bias in the survey estimates is due to non-response. Non-response bias will affect the estimates if the experiences of people who responded to the survey differed from those who chose not to respond.

There are also potential differences in the expectations and perceptions of people with different characteristics. People with higher expectations will likely give less positive responses. Similarly people will perceive things in different ways which may make them more or less likely to respond positively. When making comparisons between NHS Boards it should be remembered that these may be affected by differences in patient characteristics. This should not affect comparisons between years.

Consideration should also be given to the varying size of NHS Boards in Scotland. Across the Boards there is a large variation in the geographic coverage, population sizes as well as hospital sites and type which should be borne in mind when reviewing survey findings.

Some of the bias is adjusted for by weighting the results. The specific weighting strategy used is detailed in the technical reports that accompany each set of survey results.

Care Experience Team

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