



# Inpatient Experience Survey 2018

## Technical Report

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# 1. Introduction and Background

This report provides information on the technical aspects of the 2018 Inpatient Experience Survey, including development, implementation, analysis and reporting.

The Inpatient Experience Survey is one of a suite of national surveys which are part of the Scottish Care Experience Survey Programme. The surveys aim to provide local and national information on the quality of health and care services from the perspective of those using them. They allow local health and care providers to compare with other areas of Scotland and to track progress in improving the experiences of people using their services.

Information about the other national care experience surveys is available at [www.gov.scot/Topics/Statistics/Browse/Health/careexperience](http://www.gov.scot/Topics/Statistics/Browse/Health/careexperience).

The survey programme supports the three quality ambitions of the *2020 Vision*<sup>1</sup> - Safe, Effective, Person-centred - by providing a basis for the measurement of quality as experienced by service users across Scotland. In particular the surveys support the person-centred quality ambition which is focused on ensuring that care is responsive to people's individual preferences, needs and values.

The survey covers seven specific areas of people's experience: admission to hospital; the hospital and ward; care and treatment; hospital staff; operations and procedures; arrangements for leaving hospital; and care and support services after leaving hospital.

The Inpatient Experience Survey is jointly supported by Scottish Government, Information Services Division (ISD Scotland)<sup>2</sup> and NHS Boards. National results and an interactive dashboard containing local results were published on 28 August 2018.

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<sup>1</sup> [www.gov.scot/Topics/Health/Policy/2020-Vision](http://www.gov.scot/Topics/Health/Policy/2020-Vision)

<sup>2</sup> The Information Services Division (ISD) is part of National Services Scotland. ISD provides health information, health intelligence, statistical services and advice that supports the NHS in progressing quality improvement in health and care. ISD's role in the inpatient survey is to analyse the national and local results and produce NHS Board and hospital level reports.

## 2. Outputs from the Survey

A report containing the National results is available on the Scottish Government website at [www.gov.scot/ISBN/9781787811416](http://www.gov.scot/ISBN/9781787811416)

### Interactive Dashboard

As described above, in addition to the national report, there are local results for Regions, NHS Boards and hospitals available via an interactive dashboard at [www.careexperience.scot.nhs.uk/Dashboard2018.html](http://www.careexperience.scot.nhs.uk/Dashboard2018.html)

This dashboard also contains results at strata level. Strata were agreed with each NHS Board to meet their needs in providing local results at the most useful level. These strata were defined either at site (hospital) level, sub-site (directorate or grouped specialities) level or as groupings of smaller hospitals, depending on what was most appropriate for each NHS Board.

The dashboard consists of seven components:

- **Overall Experience:** A chart based on the overall experience question and a trend covering 2014 to 2018. Users are able to select and compare two areas across all levels.
- **Detailed Experience Ratings:** Results for the per cent positive style questions in the survey (as listed in Annex A), shown as the percentage of people who answered each question. Bar charts showing the positive / neutral / negative split are also provided. Additional charts show the per cent positive rating over time (since 2014) where appropriate.

Users are able to select and compare two areas across all levels. They can also choose the questions they wish to display by selecting from a dropdown menu.

- **Summary of Positive Experience:** A scatter plot giving an overview of all per cent positive questions.
- **Maps of Experience Ratings:** A map showing the per cent positive results for individual questions at NHS Board or hospital level.
- **Most Positive and Negative Experience Ratings:** The most positively and negatively rated questions, up to a maximum of ten. Users can switch between most positive and negative; choose how many questions to view; and are able to select and compare two areas across all levels.
- **Other Experience Questions:** Percentage breakdowns for non-per cent positive style questions, i.e. where the categories of response cannot be put on a positive-negative scale. This includes demographic information. Users can choose questions to be displayed from a dropdown menu and are able to select and compare two areas across all levels.

- **Variation in Positive Experience Ratings:** Charts showing per cent positive results in relation to a range of per cent positive results. The range will be that of all areas within that level, i.e. if an NHS Board is selected the range would be that of all NHS Boards. The national figure will be indicated on all charts.

Users will be able to choose the questions they wish to display and select areas within NHS Boards and hospitals.

More detailed explanatory notes on how to navigate and interpret the dashboards are available on the website text accompanying the dashboards. The dashboard will be reviewed and updates made based on user feedback.

## 3. Survey Design

### Survey Development

The survey questionnaire was fundamentally redeveloped ahead of the 2014 survey, details of which are available in the 2014 survey's technical report [www.gov.scot/Publications/2015/03/9281/0](http://www.gov.scot/Publications/2015/03/9281/0).

Minimal changes were made to the 2016 survey to ensure comparability and allow reporting of trends over time.

The questionnaire was reviewed again ahead of the 2018 survey to ensure continued relevance of survey questions and to reduce the overall length of the questionnaire.

The survey materials were also reviewed in 2018 to improve engagement with respondents and to ensure compliance with General Data Protection Regulations. This included improving the information provided to survey recipients in the covering letter and also introducing a privacy notice for the survey which is available at [www.gov.scot/InpatientPrivacyNotice](http://www.gov.scot/InpatientPrivacyNotice).

### Survey Materials

The survey was administered by post.

The initial survey mail out included a questionnaire, an invitation letter, an information leaflet in a range of languages and a freepost envelope. Respondents also had the option to complete and return the questionnaire online or via a telephone helpline in a wide range of languages. The helpline was also available to handle questions or complaints about the survey.

A first reminder letter was sent out a few weeks after the initial mail out, followed by a final reminder which included a full survey pack.

Copies of all of the survey materials can be found at [www.gov.scot/Inpatientsurvey](http://www.gov.scot/Inpatientsurvey).

## Changes to 2018 Questionnaire

**Table 1: New questions for the 2018 survey**

Question Number	Topic	Question	Reason for inclusion
2	Admission to Hospital	Were you kept informed about how long you would wait to be admitted to hospital after you were referred?	Replaces previous question about length of wait.
18	Staff	Range of questions about staff	Asks about all staff, rather than specifically doctors and nurses. N/A response option removed.
18a	Staff	Staff spent enough time with me	Covering person-centred behaviours from staff
18d	Staff	Staff gave me the opportunity to involve the people that matter to me	Covering person-centred behaviours from staff
18f	Staff	Staff helped me to feel in control of my treatment/care	Covering person-centred behaviours from staff
19	Staff	Roughly, how many times did hospital staff ask you for your personal details, including your medical history?	To fill evidence gap around staff requesting personal information / medical history.
29	Leaving hospital	Were you and / or your carer involved in planning for your discharge from hospital?	To incorporate carers in planning for discharge
30	Leaving hospital	Did the hospital staff give you, your carer or someone else close to you all the information needed to help care for you at home?	To fill evidence gap on having enough information for self-care after leaving hospital
31	Leaving hospital	Were the arrangements for any follow up appointments explained to you in a way that you understood?	To fill evidence gap on people's experience of follow up appointments
35	Leaving hospital	Where did you wait when you were delayed?	To fill evidence gap about where people have waited when delayed
38	Care and Support Services	Were you confident that any care or support services you needed had been arranged for you before you left hospital?	To understand people's confidence in support arrangements
39	Care and Support Services	What care or support services did you need?	To collect data on which services people are referring to
40	Care and Support Services	Were you given enough information about your care and support arrangements before leaving hospital?	To assess how informed people felt in this area
41	Care and Support Services	Did you have a choice in the care or support services arranged for you?	To cover experience of person-centred behaviour (choice) in this area
43	Overall Experience	Did you speak to staff about the standard of your care and treatment or the services provided at any time?	To collect more information about opportunities for feedback and complaints



Question Number	Topic	Question	Reason for inclusion
44	Overall Experience	If you were unhappy or dissatisfied with care, treatment or services, were you able to find out how to provide feedback or complain?	To collect more information about opportunities for feedback and complaints

**Table 2: Questions that were changed in the 2018 survey**

2018 Q. No.	2016 Q. No.	Topic	Question	Reason for change
10	14	The Hospital and Ward	How much do you agree or disagree with each of the following statements?	Question wording shortened to simplify. 'N/A' response option removed and instruction added to question.
10g	Q14g	The Hospital and Ward	I received care and assistance when I needed it	Wording change from Q14g
11	19	The Hospital and Ward	Did you feel you were able to spend enough time with the people that matter to you?	Minor changes to the question wording to simplify and a 'N/A' response option added.
12	32	The Hospital and Ward	If you moved wards when you were in hospital, what time of day did you move?	Wording of response options simplified and a new response option added to combine 2016 Q31 and Q32.
14	21	Care and Treatment	How much do you agree or disagree with each of the following statements?	Question wording shortened to simplify. 'N/A' response option removed and instruction added to question.
23	35	Operations and Procedures	During your most recent hospital stay, did you have an operation or procedure?	'Don't know' response option added.
26	38	Operations and Procedures	Beforehand, were you told how you could expect to feel after you had the operation or procedure?	Minor change to response option 4 to improve flow.
32	50	Leaving Hospital	On the day you left hospital, were you delayed for any reason?	'Don't know' response option added.
33	52	Leaving Hospital	Roughly, how long were you delayed for?	Wording of question and response options 2 and 3 simplified.
34	51	Leaving Hospital	Why were you delayed?	Wording of response options simplified. New response options added following request from policy team. Question made 'tick all that apply' and reworded to remove reference to "main" reason.
36	56	Leaving Hospital	If your condition meant you were eligible for hospital transport to take you home, were you happy with how this was arranged?	Wording of response option 1 and order of options changed to improve flow. 'Don't know' response option added.
45	66	Overall Experience	Overall, how would you rate your experience?	Minor changes to the question wording to improve flow.

2018 Q. No.	2016 Q. No.	Topic	Question	Reason for change
49	69	About you	What best describes your gender?	Question changed to match wording in the 2017/18 Health and Care Experience Survey
50	70	About you	In general how would you rate your health?	Question changed to match wording in the 2017/18 Health and Care Experience Survey
51	71	About you	Do you have any of the following?	Question changed to match wording in the 2017/18 Health and Care Experience Survey

**Table 3: Questions that were removed for the 2018 survey**

2016 Q. No.	Topic	Question	Reason for removal
4	Admission to Hospital	How did you feel about the length of time you waited to be seen in A&E?	Q4 in 2018 survey provides more useful information
7	Admission to Hospital	Were you given enough privacy in A&E?	Data not prioritised against other questions
10	Admission to Hospital	How did you feel about the length of time you waited to be admitted after you were referred?	Q2 in 2018 survey provides more useful information
11	Admission to Hospital	Did the information you were given in advance help you to understand what would happen?	Data not prioritised against other questions
12	Admission to Hospital	How did you feel about the time you had to wait to get a bed on the ward?	Data can't be used in practice
14g	The Hospital and Ward	When I called I received assistance within a reasonable time	Replaced with Q10g in 2018
14i	The Hospital and Ward	The equipment used for my treatments was clean	Patient not necessarily qualified to know this
15	The Hospital and Ward	Did you know which nurse was in charge of the ward?	Does not directly relate to patient experience
16	The Hospital and Ward	Were hand-wash gels available for patients and visitors?	Does not directly relate to patient experience
17	The Hospital and Ward	Did you have a single room at any time?	Does not directly relate to patient experience
18	The Hospital and Ward	Were you happy with the visiting hours?	Covered by 2018 Q11
21a	Care and Treatment	I was able to get pain relief when needed	Data not prioritised against other questions
21c	Care and Treatment	I had enough privacy when discussing condition / treatment	Covered by 2018 Q14a
21g	Care and Treatment	I was kept as physically comfortable as I could expect to be	Data not prioritised against other questions

2016 Q. No.	Topic	Question	Reason for removal
24	Care and Treatment	Did you feel that staff took adequate care when carrying out procedures?	Patient not necessarily qualified to know this
25	Care and Treatment	While you were in hospital did your condition get worse at any time?	Patient not necessarily qualified to know this
26	Care and Treatment	If you had a drip or needle in a vein, did the following occur?	Patient not necessarily qualified to know this
27	Care and Treatment	Problems experienced during or after stay	Patient not necessarily qualified to know this
28	Care and Treatment	Negative events that occurred during stay	Patient not necessarily qualified to know this
29	Care and Treatment	Where negative events were discussed with staff	Because Q28 removed
30	Care and Treatment	Satisfaction with how negative events were dealt with	Because Q28 removed
31	Care and Treatment	Did you move wards	Covered by 2018 Q12
33	Care and Treatment	Was moving you between wards managed well	Data not prioritised against other questions
41	Staff	Agreement with statements about doctors	Covered by 2018 Q18
42	Staff	Agreement with statements about nurses	Covered by 2018 Q18
43	Staff	Did you know which nurse was in charge of your care?	Data can't be used in practice
44	Staff	In your opinion, were there enough nurses on duty to care for you?	Data can't be used in practice
46	Staff	Did you feel that staff took account of the things that matter to you?	Replaced with more detailed questions related to the "Must do with me's" in Q18
47	Staff	Did you feel that you got enough emotional support from staff?	Data not prioritised against other questions
53	Leaving Hospital	How did you feel about the overall length of time you were in hospital?	Data can't be used in practice
54	Leaving Hospital	Were you confident you could look after yourself when you left hospital?	Covered by 2018 Q30 / Q31
55	Leaving Hospital	Were you confident that any help you needed had been arranged for you?	Covered by 2018 Q30 / Q31
57	Leaving Hospital	Agreement with statements about leaving hospital	Data not prioritised against other questions. a) covered by 2018 Q29
58	Leaving Hospital	Were you given any medicines?	Data not prioritised against other questions
59	Leaving Hospital	Agreement statements about medicines	Data not prioritised against other questions

2016 Q. No.	Topic	Question	Reason for removal
61	After Leaving Hospital	Did you need care / support services after your hospital stay?	Covered by 2018 Q38
62	After Leaving Hospital	Did you have to stay in hospital longer than expected?	Data can't be used in practice
63	After Leaving Hospital	Did you feel that you got the care and support services that were right for you?	Changed to Q41
65	Overall Experience	Did you see any information explaining how to provide feedback or complain?	Covered by 2018 Q43 & Q44
68	About you	What is your age?	Age groups will be derived from CHI number on SMR01
72	About you	Are your day-to-day activities limited?	Not currently required
73	About you	What is your religion?	Not currently required
74	About you	Respondents sexuality	Not currently required
75	About you	What is your ethnic group?	Not currently required
76	About you	Do you need an interpreter or other help to communicate?	Not currently required
77	About you	Permission to link data	No longer appropriate under GDPR

## 4. Sample Design

The sampling approach for the Inpatient Experience Survey was designed to meet the needs of each NHS Board and to inform local improvement work, whilst also being able to give a meaningful comparison across NHS Boards and provide National level results.

A stratified sampling strategy was developed through consultation between the analyst team within the Scottish Government, analysts at ISD Scotland and representatives from NHS Boards.

Sample strata were agreed with each NHS Board to meet their needs in providing local results at the most useful level. These strata were defined either at site (hospital) level, sub-site (directorate or grouped specialities) level or as groupings of smaller hospitals, depending on what was most appropriate for each NHS Board.

### Sampling Frame

Sampling for this survey was undertaken by analysts at ISD Scotland.

Eligible people were identified from an extract from ISD's Scottish Morbidity Records database (SMR01) of hospital admissions.

Eligible people were defined as adults (aged 16 years old and above on discharge from hospital) who had an overnight stay in hospital as an inpatient (defined as one night or more where the individual was in hospital at midnight in an inpatient bed) between April 2017 and September 2017.

Details of the type of people excluded from the survey are as follows:

- People who received privately funded care in NHS or private hospitals;
- People treated in hospitals outside of Scotland but whose care was commissioned by an NHS Board;
- People who were not resident in Scotland;
- People who were receiving care as an outpatient or day case which did not result in an overnight stay;
- People who were expected to have an overnight stay at admission but did not;
- Women who stayed in hospital for termination of pregnancy;
- Women who stayed in a hospital maternity unit;
- People who were known to be deceased, i.e. those who had death recorded on SMR01 records and/or the National Records of Scotland Deaths Database;
- People treated in a hospice;
- People who were being treated for a mental health condition in a mental illness hospital;
- People who were resident in a long-stay hospital;

- People who were being treated in a learning disabilities unit;
- People not registered with a GP Practice and;
- People aged 15 or less on discharge from hospital.

Unfortunately, an error which occurred during the sampling process resulted in one strata in NHS Ayrshire and Arran (Medical, Cardiac, Geriatric in Ayr Hospital) also being excluded from the 2018 survey. This affects not only this strata, but also the organisational levels it is associated with: hospital, NHS Board and Region. This omission has been highlighted within the dashboard of local level results and a separate survey is being undertaken in this area to rectify this error. The local level analysis will be updated once that additional survey has been completed.

The addresses from the Community Health Index (CHI) were cross checked against the Postcode Address File to ensure that they were complete. Any records where the address wasn't recognised were removed from the survey sample frame, as were a small number of people who had requested not to be included in this or other surveys.

Based on the selection and exclusion criteria, the total number of inpatients who were eligible to take part in the survey was 180,713<sup>3</sup>.

### **Sampling Design and Sample Size Calculation**

Sampling was undertaken within strata, to achieve a reasonably reliable result for each strata. The agreed level of reliability was an estimate of a percentage that has a 95 per cent confidence interval with width +/- five percentage points, sampled from a finite population. When the strata had less than 1,000 inpatients in the sampling period, this was increased to a width of +/- seven percentage points to avoid sampling too many people.

The sample size that was calculated for each strata was based on the minimum number of responses required to meet the agreed level of accuracy, adjusted upwards to allow for assumed non-response to the survey. Expected response rates within each NHS Board were calculated based on the response rates achieved in the 2016 Survey.

For strata where the calculated required sample size is greater than the number of eligible inpatients in the sampling period, all eligible inpatients are sampled.

Table 4 shows the Inpatient population, required number of responses and sample sizes at NHS Board level.

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<sup>3</sup> This total excludes people who were recorded as being deceased on SMR01 and/or the National Records of Scotland Deaths Database, but includes people who were identified as being deceased by NHS CR following initial sampling. These people were subsequently removed from the sample before surveys were sent (see Section 5 for more information).

**Table 4: Sample size by NHS Board**

<b>NHS Board</b>	<b>Total inpatient population in reference period</b>	<b>Number of responses required</b>	<b>Required sample size</b>	<b>Sampling rate</b>
NHS Ayrshire & Arran	11,524	1,874	4,846	42%
NHS Borders	3,315	344	712	21%
NHS Dumfries & Galloway	4,715	1,217	2,800	59%
NHS Fife	9,690	628	1,686	17%
NHS Forth Valley	8,378	498	1,167	14%
Golden Jubilee Foundation	3,655	635	918	25%
NHS Grampian	16,432	2,860	6,006	37%
NHS Greater Glasgow & Clyde	49,945	6,194	16,875	34%
NHS Highland	8,822	2,407	5,075	58%
NHS Lanarkshire	19,116	1,087	2,968	16%
NHS Lothian	27,760	2,534	5,678	20%
NHS Orkney	415	133	240	58%
NHS Shetland	487	140	330	68%
NHS Tayside	15,630	1,138	2,414	15%
NHS Western Isles	829	229	460	55%
<b>Scotland</b>	<b>180,713</b>	<b>21,919</b>	<b>52,175</b>	<b>29%</b>

## 5. Fieldwork

The Scottish Government contracted Quality Health Ltd to administer the survey. Quality Health Ltd has in-depth experience of NHS surveys, and has provided support for other care experience survey work both in Scotland and elsewhere in the UK. ISD Scotland provided support for the administration of the survey along with Scottish Government analytical staff.

### Mail-out

The fieldwork began on 31 January 2018 with 51,440 survey packs initially posted by the contractor on behalf of each NHS Board<sup>4</sup>.

Reminder letters were sent out twice during the duration of fieldwork to further encourage participation in the study. The first reminder, which consisted solely of a reminder letter, was sent on 28 February 2018 to all people who did not respond to the first mailing in the three or four weeks after receiving the initial survey pack.

A second reminder, which consisted of a full survey pack, was sent out on 21 March 2018 to all those people who did not respond approximately four weeks after the first reminder letter was issued.

### Data Collection

Data was collected in the form of hardcopy (postal) returns and online returns.

During the fieldwork, a free helpline was made available to respond to queries and for telephone survey completions (including a language translation service).

### People who were recently deceased

As with all Care Experience surveys, every possible effort was made by Quality Health Ltd, ISD and the Scottish Government to avoid questionnaires being sent to family members of people who had died. Therefore, similar to previous surveys, before the initial survey and reminders were issued, a list of people included in the survey was sent to NHS Central Register (NHSCR<sup>5</sup>) and linked to the National Records of Scotland (NRS) deaths database. This allows NHSCR to provide regular extracts of deceased people to ISD Scotland during the various mail-out periods. ISD subsequently passed this information on to Quality Health Ltd, who removed survey packs as required prior to mailout. Having access to death information greatly reduced the number of questionnaires being sent to addresses of deceased people. We are grateful to NHSCR for their help and support during this stage of the project.

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<sup>4</sup> Following the sample of 52,175 patients being drawn, 731 patients were identified as having died via the first death check and 4 patients were removed due records being queried by the contractor. These 735 patients were not sent a survey pack.

<sup>5</sup> [www.nrscotland.gov.uk/statistics-and-data/nhs-central-register](http://www.nrscotland.gov.uk/statistics-and-data/nhs-central-register)



A total of 731 people were identified as deceased by NHSCR checks and removed from the sample prior to the initial mail-out of the survey. These individuals were not sent survey packs.

NHS CR checks identified 498 and 354 people as deceased prior to the first and second reminders respectively. These individuals were not sent reminders. In a further 34 cases, a questionnaire was sent to a person who had died but had not yet appeared on the deaths database and the person's family contacted Quality Health Ltd to notify them of this.

Any death which occurs in Scotland must be registered within eight days of the date of death. This means that there can be a delay between the actual date of death and the date that it is registered and updated on the CHI and NRS databases.

This delay, combined with the volume of the mail out process, made it extremely difficult to prevent all questionnaires being sent to addresses of people who had died. However, as outlined above, efforts were made to avoid this as much as possible.

## 6. Data Entry and Fieldwork Quality Control

### Data Capture

Once respondents had received the initial survey pack, they could complete the survey using the paper questionnaire provided, online or via the survey helpline.

Paper questionnaires received by Quality Health Ltd were logged and scanned on a daily basis. A verification process was then carried out for each batch scanned and a number of integrity checks were undertaken to ensure that the scanning process had worked correctly and all data had been captured as expected.

Data from online questionnaires was automatically stored alongside the data from the paper questionnaires.

All response information was held separately from the names and addresses of people who were sampled for the survey.

### Verification and Upload Process

Once captured, all data are checked in house by Quality Health Ltd according to pre-set verification rules, by staff who have been given training and detailed instructions about the survey. The data entry system ensured that only valid answer codes for each question could be entered and that the correct data appeared in each field. Other checks included ensuring that numeric data was the correct format and that fields were not truncated in error.

Once the survey responses were transferred to ISD and SG statisticians, further validation checks were run on the data to ensure data integrity was maintained.

### Secure Disposal

The names and addresses of people who were selected for the survey were stored securely by Quality Health Ltd until the end of the fieldwork period. They were then destroyed.

Once processed, all returned questionnaires were immediately stored by Quality Health Ltd in labelled containers and archived in a secure room on-site until they reached their agreed destruction date. Once destroyed a certificate of destruction was provided.

### Free Text Comments

The survey asked respondents three questions where a written comment could be provided:

- Was there anything particularly good about your hospital stay?
- Was there anything that could be improved?
- Do you have any other comments?

Just over 14,500 respondents left at least one comment.

Details that could be used to identify people were suppressed when the comments were entered by staff at Quality Health Ltd. These details included personal names, addresses, medical conditions and dates. Staff names were also suppressed.

Quality checks were undertaken on records to ensure that the instructions for suppressing disclosive details were followed.

## 7. Survey Response

### Overview

The response rate for the survey is the number of completed questionnaires returned as a percentage of the number of people in the sample. In total, 51,440 surveys were sent out and 20,809 were returned completed, giving an overall response rate of 40 per cent. This is slightly lower than the response rate for the 2016 survey, which was 41 per cent<sup>6</sup>.

This section describes the differences in response rates by a range of variables. Many of these differences were also evident in previous surveys, and were taken into account when the sample sizes were calculated – see Section 4 on Sample Design for more information about this.

### Response Rates by NHS Board

**Table 5: Response rate by NHS Board**

NHS Board	Total no. of forms sent out	Number of responses	Response rate	Expected response rate
NHS Ayrshire & Arran	4,788	1,872	39%	39%
NHS Borders	706	322	46%	48%
NHS Dumfries & Galloway	2,753	1,185	43%	43%
NHS Fife	1,651	646	39%	37%
NHS Forth Valley	1,151	451	39%	43%
Golden Jubilee Foundation	913	644	71%	69%
NHS Grampian	5,912	2,785	47%	48%
NHS Greater Glasgow & Clyde	16,624	5,761	35%	37%
NHS Highland	5,018	2,321	46%	47%
NHS Lanarkshire	2,922	1,013	35%	37%
NHS Lothian	5,615	2,298	41%	45%
NHS Orkney	237	122	51%	56%
NHS Shetland	326	151	46%	42%
NHS Tayside	2,369	1,030	43%	47%
NHS Western Isles	455	208	46%	50%
<b>Scotland</b>	<b>51,440</b>	<b>20,809</b>	<b>40%</b>	<b>42%</b>

<sup>6</sup> The response rate published in the 2016 technical report was 40 per cent. However this incorrectly included 544 people identified as deceased by NHS CR and removed from the sample prior to the initial mail out. Once these people are excluded from the calculation, the overall response rate for the 2016 survey was 41 per cent.

The highest response rate for an NHS Board was the Golden Jubilee Foundation (71 per cent) and the lowest response rates were for NHS Greater Glasgow & Clyde and NHS Lanarkshire (Table 5).

## Response Rate by Deprivation

Respondents were assigned to a deprivation quintile based on their postcode using the 2016 Scottish Index of Multiple Deprivation (SIMD)<sup>7</sup>. As seen in previous surveys, the response rate was lower for people living in more deprived areas. The response rate ranged from 29 per cent for people living in the most deprived areas to 50 per cent for people living in the least deprived areas (Table 6).

**Table 6: Response rate by deprivation quintile**

SIMD Quintile	Total number of forms sent out	Number of Responses	Response rate
1 (Most deprived)	12,511	3,651	29%
2	11,199	4,307	38%
3	11,023	4,754	43%
4	9,278	4,371	47%
5 (Least deprived)	7,429	3,726	50%
<b>Scotland</b>	<b>51,440</b>	<b>20,809</b>	<b>40%</b>

## Response Rate by Urban / Rural Location

Respondents were assigned to an Urban / Rural category based on their postcode using the Scottish Government's 2016 six-fold Urban / Rural classification<sup>8</sup>. The response rate ranged from 35 per cent of people living in large urban areas to 50 per cent of people living in remote rural areas (Table 7).

**Table 7: Response rate by urban / rural location**

Urban / Rural Category	Total number of forms sent out	Number of Responses	Response rate
Large urban areas	16,145	5,661	35%
Other urban areas	17,813	7,010	39%
Accessible small towns	4,225	1,830	43%
Remote small towns	3,169	1,370	43%
Accessible rural	5,007	2,389	48%
Remote rural	5,081	2,549	50%
<b>Scotland</b>	<b>51,440</b>	<b>20,809</b>	<b>40%</b>

<sup>7</sup> [www.gov.scot/Topics/Statistics/SIMD](http://www.gov.scot/Topics/Statistics/SIMD)

<sup>8</sup> [www.gov.scot/Topics/Statistics/About/Methodology/UrbanRuralClassification](http://www.gov.scot/Topics/Statistics/About/Methodology/UrbanRuralClassification)

## Response Rate by Age Group

The response rate increased with age up to 75+ and was highest in the 65 to 74 age group (57 per cent). This compared to a response rate of 15 per cent for those aged 25-34 (Table 8).

**Table 8: Response rate by age group (derived from CHI number on SMR01)**

Age Group	Total number of forms sent out	Number of Responses	Response rate
17 to 24	2,765	445	16%
25 to 34	3,559	531	15%
35 to 44	4,321	1,002	23%
45 to 54	6,488	2,173	33%
55 to 64	8,021	3,826	48%
65 to 74	9,950	5,652	57%
75 +	16,336	7,180	44%
<b>Scotland</b>	<b>51,440</b>	<b>20,809</b>	<b>40%</b>

## Response Rate by Gender

The response rate was 40 per cent for males and 41 per cent for females (Table 9).

**Table 9: Response rate by gender (derived from CHI number on SMR01)**

Gender	Total number of forms sent out	Number of Responses	Response rate (%)
Male	22,751	9,178	40%
Female	28,689	11,631	41%
<b>Scotland</b>	<b>51,440</b>	<b>20,809</b>	<b>40%</b>

## Method of Response

Of the 20,809 respondents, 88 per cent sent their surveys back by post with almost all of the rest completing the survey online. Eighty-six people completed their survey via the telephone (Table 10).

**Table 10: Response by method**

Method	No. of questionnaires completed	% of questionnaires completed
Online	2,412	12%
Post	18,311	88%
Telephone helpline	86	0%
Language line	0	0%
<b>Scotland</b>	<b>20,809</b>	<b>100%</b>

## 8. Analysis and Reporting

The survey data collected and coded by Quality Health Ltd were securely transferred to ISD Scotland, where the information was analysed using the statistical software package SPSS version 21.0.

### Reporting the Gender of Respondents

Analysis of survey response rates by gender was undertaken using the gender of people in the sample according to their CHI number recorded on the SMR01 record at the time of data extraction (15 January 2018). This source was also used in the calculation of the survey weights (more information about this is provided later in this section).

For all other analyses by gender, the respondents' answer to Question 49 "What best describes your gender?" has been used. In total, 20,388 responders (98 per cent) provided a valid response to Question 49.

### Reporting the Age of Respondents

Respondent date of birth was taken from their CHI number recorded on the SMR01 record at the time of data extraction (15 January 2018). This source was used for all stages of the analysis. The age of respondents used for reporting purposes was calculated as at date of discharge from hospital.

### Number of Responses Analysed

The number of responses that have been analysed for each question is often lower than the total number of survey responses received. This is because not all of the questionnaires that were returned could be included in the calculation of results for every individual question. In each case this was for one of the following reasons:

- The specific question did not apply to the respondent and so they did not answer it. For example if they were not admitted to the A&E department and therefore did not answer questions about experiences of A&E.
- The respondent did not answer the question for another reason (e.g. refused). People were advised that if they did not want to answer a specific question they should leave it blank.
- The respondent answered that they did not know or could not remember the answer to a particular question.
- Responses may be removed following validation checks, for example if a respondent selected an invalid combination of responses. Improved validation checks were introduced for this survey to ensure consistency between online and paper responses.

The number of responses that have been analysed nationally for each of the positive / negative questions are shown in Annex A.

## Weighting

When conducting a survey, it is important to have a representative sample of the population you are interested in. Applying weighting methods reduces potential bias by making the results more representative of the population.

Survey weights are numbers associated with the responses that specify the influence the various observations should have in the analysis. The final survey weight associated with a particular response can be thought of as a measure of the number of population units represented by that response.

A review of the weighting methodology was undertaken in advance of the 2018 survey, leading to some changes in the weights applied. Details of the review, the full methodology applied to the 2018 results and the impacts of the change are available at [www.gov.scot/Resource/0053/00538713.pdf](http://www.gov.scot/Resource/0053/00538713.pdf)

Results at all levels of reporting in the 2018 National Report and interactive dashboard are weighted.

## Backdating of Previous Surveys

Due to the new weighting methodology introduced for this survey, figures from previous surveys have been backdated where appropriate to ensure comparisons over time are available.

As part of the backdating process, the improved validation checks brought in for the 2018 survey were also applied to responses from the 2014 and 2016 surveys. This means the total number of responses for analysis may differ from those previously published. It has not been possible to backdate survey results prior to 2014; any breaks in this time series have been highlighted in the main report.

Reports specifically relating to previous surveys **will not** be updated to include the backdated figures.

## Percentage Positive and Negative

Per cent or percentage positive is frequently used in reporting results from this survey. This means the percentage of people who answered in a positive way. Annex A details which responses have been classed as positive and negative for each question.

Percentage positive is mainly used to allow easier comparison rather than reporting results on the wider scale that people used to answer the questions. There is also a belief that differences between answers on a five point scale may be subjective. For example there may be little or no difference between a person who “strongly agrees” and one who “agrees” with a statement. In fact some people may never strongly agree or strongly disagree with any statements.

As described in Section 4 of this report, these results are based on a sample of patients and are therefore affected by sampling error. 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. All significance testing is carried out at the 5% level.

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

### **Quality Assurance of the National Report**

A small group of Scottish Government analysts were sent a draft version of the national report for quality assurance. Feedback included suggestions on ways in which to report data as well as comments about the context for the survey. These were taken into account in finalising the national report. In addition, staff at ISD Scotland carried out quality checks of figures used in the report.

### **Revisions to previous publications**

A copy of our revisions policy is available at:  
[www.gov.scot/Resource/0052/00522934.pdf](http://www.gov.scot/Resource/0052/00522934.pdf)

## Annex A: Per cent Positive and Negative Responses

Table A1 shows which responses were classed as positive and negative. Answers such as 'neither agree nor disagree' and 'fair' were treated as neutral. Other answers such as 'can't remember / don't know' and 'not relevant' were excluded from the analysis.

Table A1 also shows how many respondents there were nationally for each of the per cent positive questions.

**Table A1: Number of respondents and response codes for per cent positive style questions**

Question Number	Topic	Question Text	Positive values	Neutral values	Negative values	Excluded values	Number of responses analysed
Q2	Admission to hospital	Were you kept informed about how long you would have to wait to be admitted to hospital after you were referred?	1	2	3	4	7,266
Q4	Admission to hospital	In A&E, were you kept informed about how long you would have to wait to be seen by a nurse or doctor?	1	2	3	4	7,983
Q5	Admission to hospital	Once seen by a nurse or doctor, were you kept informed about what was happening?	1	2	3	4	8,450
Q6	Admission to hospital	Did you feel safe when you were in A&E?	1	2	3	4	8,577
Q7	Admission to hospital	Did a nurse or doctor discuss your condition with you in a way you could understand?	1	2	3	4,5	8,176
Q8	Admission to hospital	Overall, how would you rate the care and treatment you received during your time in A&E?	1,2	3	4,5	-	8,872
Q9	Admission to hospital	Overall, how would you rate your admission to hospital – that is the time after you arrived at hospital until you got to a bed on the ward?	1,2	3	4,5	-	20,037
Q10a	Hospital & ward	The main ward or room I stayed in was clean.	1,2	3	4,5	6	20,384
Q10b	Hospital & ward	The bathrooms and toilets were clean.	1,2	3	4,5	6	20,095
Q10c	Hospital & ward	I was bothered by noise at night from other patients	4,5	3	1,2	6	18,735

Question Number	Topic	Question Text	Positive values	Neutral values	Negative values	Excluded values	Number of responses analysed
Q10d	Hospital & ward	I was bothered by noise at night from hospital staff.	4,5	3	1,2	6	19,000
Q10e	Hospital & ward	I was happy with the food and / or meals I received.	1,2	3	4,5	6	19,873
Q10f	Hospital & ward	I was happy with the drinks I received.	1,2	3	4,5	6	20,023
Q10g	Hospital & ward	I received care and assistance when I needed it	1,2	3	4,5	6	20,280
Q10h	Hospital & ward	There were times when I felt threatened by other patients or visitors	4,5	3	1,2	6	19,376
Q11	Hospital & ward	Did you feel you were able to spend enough time with the people that matter to you – for example family and friends?	1	2	3	4,5	18,902
Q13	Hospital & ward	Overall, how would you rate the hospital and ward environment?	1,2	3	4,5	-	20,289
Q14a	Care & treatment	I had enough privacy when being examined or treated.	1,2	3	4,5	6	20,353
Q14b	Care & treatment	I got enough help with washing and dressing when I needed it.	1,2	3	4,5	6	17,910
Q14c	Care & treatment	I got enough help with eating and drinking when I needed it.	1,2	3	4,5	6	16,206
Q14d	Care & treatment	I got enough help with going to the bathroom or toilet when I needed it.	1,2	3	4,5	6	17,303
Q15	Care & treatment	Were you involved as much as you wanted to be in decisions about your care and treatment?	1	2	3	4	19,614
Q16	Care & treatment	Were the people that matter to you, such as family and friends, involved in decisions about your care and treatment as much as you wanted?	1	2	3	4	13,590
Q17	Care & treatment	Overall, how would you rate your care and treatment during your stay in hospital?	1,2	3	4,5	-	19,992

Question Number	Topic	Question Text	Positive values	Neutral values	Negative values	Excluded values	Number of responses analysed
Q18a	Staff	Staff spent enough time with me	1,2	3	4,5	6	19,943
Q18b	Staff	Staff listened to me if I had any questions or concerns	1,2	3	4,5	6	19,524
Q18c	Staff	Staff discussed my condition and treatment with me in a way I could understand	1,2	3	4,5	6	19,562
Q18d	Staff	Staff gave me the opportunity to involve the people that matter to me	1,2	3	4,5	6	17,370
Q18e	Staff	Staff talked in front of me as if I wasn't there	4,5	3	1,2	6	18,518
Q18f	Staff	Staff helped me to feel in control of my treatment / care	1,2	3	4,5	6	18,866
Q20	Staff	Did you feel that staff treated you with compassion and understanding during your stay?	1	2	3	4	20,142
Q21	Staff	Do you think that staff worked well together in organising your care?	1	2	3	4	19,953
Q22	Staff	Overall, how would you rate the hospital staff you came into contact with?	1,2	3	4,5	-	20,215
Q24	Operations & procedures	Beforehand, did a member of staff explain the risks and benefits of the operation or procedure in a way you could understand?	1	2	3	4	11,210
Q25	Operations & procedures	Beforehand, did a member of staff explain what would be done during the operation or procedure?	1	2	3	4	11,175
Q26	Operations & procedures	Beforehand, were you told how you could expect to feel after you had the operation or procedure?	1	2	3	4	11,122
Q27	Operations & procedures	Beforehand, did a member of staff answer your questions about the operation or procedure in a way you could understand?	1	2	3	4	10,761

Question Number	Topic	Question Text	Positive values	Neutral values	Negative values	Excluded values	Number of responses analysed
Q28	Operations & procedures	After the operation or procedure, did a member of staff explain how it had gone in a way you could understand?	1	2	3	4	11,073
Q29	Leaving hospital	Were you and / or your carer involved in planning for your discharge from hospital?	1	2	3	4	19,465
Q30	Leaving hospital	Did hospital staff give you, your carer or someone else close to you all the information needed to help care for you at home?	1	2	3	4	16,788
Q31	Leaving hospital	Were the arrangements for any follow up appointments explained to you in a way that you understood?	1	2	3	4	16,315
Q36	Leaving hospital	If your condition meant you were eligible for hospital transport to take you home, were you happy with how this was arranged?	1	-	2	3,4	3,881
Q37	Leaving hospital	Overall, how would you rate the arrangements made for you leaving hospital?	1,2	3	4,5	-	19,429
Q38	Care & support services	Were you confident that any care or support services you needed had been arranged before you left hospital?	1	2	3	4	8,819
Q40	Care & support services	Were you given enough information about your care and support arrangements before leaving hospital?	1	2	3	4	8,019
Q41	Care & support services	Did you have a choice in the care or support services arranged for you?	1	2	3	4	7,307
Q42	Care & support services	Overall, how would you rate the care or support services you used after leaving hospital?	1,2	3	4,5	-	7,970
Q44	Overall	If you were unhappy or dissatisfied with care, treatment or services, were you able to find out how to provide feedback or complain?	1	-	2	3	5,444

## **A National Statistics Publication for Scotland**

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Designation can be interpreted to mean that the statistics: meet identified user needs; are produced, managed and disseminated to high standards; and are explained well.

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### **How to Access Background or Source Data**

The data collected for this statistical publication are available in more detail through [www.gov.scot/inpatientsurvey](http://www.gov.scot/inpatientsurvey).

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