Technical Supplement: Small and Rural Hospitals Survey, 2015

November 2016

Contents

The NSW Patient Survey Program

The NSW Patient Survey Program began surveying patients in NSW public facilities from 2007. From 2007 to mid-2012, the program was coordinated by the NSW Ministry of Health using questionnaires obtained under license from NRC Picker. Ipsos Social Research Institute Ltd (Ipsos) was contracted to manage the logistics of the survey program. Responsibility for the Patient Survey Program was transferred from the Ministry of Health to the Bureau of Health Information (BHI) in July 2012, with Ipsos continuing as the contracted partner to manage the logistics.

The aim of the survey program is to measure and report on patients' experiences of care in public health facilities in New South Wales (NSW), on behalf of the NSW Ministry of Health and the local health districts (LHDs). The results are used as a source of performance measurement for individual hospitals, LHDs and NSW as a whole.

This document outlines the sampling methodology, data management and analysis of the 2015 Small and Rural Hospitals Survey (SRHS).

For information on the development of this questionnaire, please refer to the Development Report at bhi.nsw.gov.au/nsw_patient_survey_program

More information is also available through the BHI website on how to interpret results and whether differences in the results between hospitals, LHDs or NSW are statistically different.

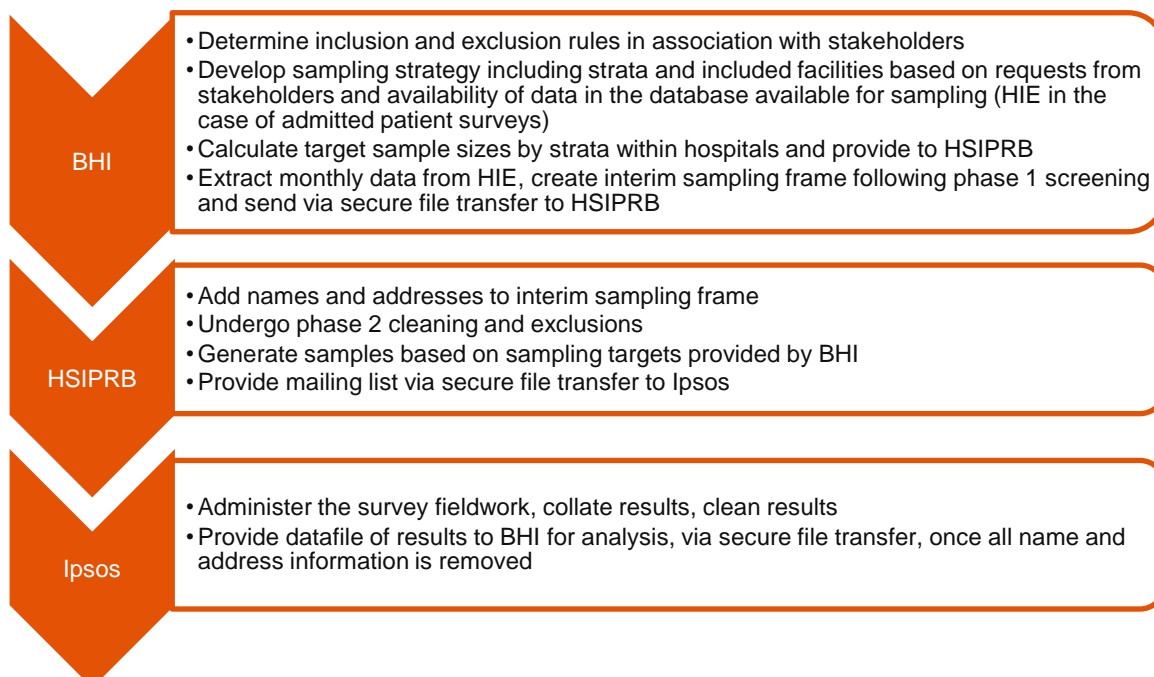# Organisational roles in producing survey samples

The survey program assures patients that their responses will be confidential and that staff at hospitals will not be able to determine who gave which response. BHI does this through a number of mechanisms, including:

- Data suppression (results based on fewer than 30 responses are suppressed)
- Reporting aggregated results
- Anonymisation of patient comments
- Segregation of roles when constructing the survey samples (see below).

The sampling method for the survey program is a collaboration between BHI, Ipsos and the Ministry of Health's Health Systems Performance Information and Reporting Branch (HSPIRB) (see Figure 1). All surveys of admitted patients use data obtained from the Health Information Exchange (HIE).

BHI has access to de-identified unit record data from selected tables of the HIE database. Use of an encrypted patient number allows deduplication at the patient level within a hospital. For the SRHS, sampling frames are defined separately for each month, with the date of discharge used to define eligible records. Sample sizes for each included hospital are calculated in advance, as defined later in this report.

Figure 1: Organisational responsibilities in sampling and survey processing, Small and Rural Hospitals Survey, 2015

BHI
- Determine inclusion and exclusion rules in association with stakeholders
- Develop sampling strategy including strata and included facilities based on requests from stakeholders and availability of data in the database available for sampling (HIE in the case of admitted patient surveys)
- Calculate target sample sizes by strata within hospitals and provide to HSIPRB
- Extract monthly data from HIE, create interim sampling frame following phase 1 screening and send via secure file transfer to HSIPRB

HSIPRB
- Add names and addresses to interim sampling frame
- Undergo phase 2 cleaning and exclusions
- Generate samples based on sampling targets provided by BHI
- Provide mailing list via secure file transfer to Ipsos

Ipsos
- Administer the survey fieldwork, collate results, clean results
- Provide datafile of results to BHI for analysis, via secure file transfer, once all name and address information is removed

Inclusion criteria

The list of patients attending small and rural hospitals is obtained by BHI from the Health Information Exchange (HIE). There are two phases of cleaning applied prior to selection of the sample.

Stage 1: First phase of screening

The first phase of screening is applied by BHI. In this phase, a series of rules are applied to define the interim sampling frame. These criteria take into account a range of factors including: the potentially high vulnerability of particular patient groups and/or patients with particularly sensitive reasons for admission; these patients' ability to answer questions; and the relevance of the survey questions to particular patient groups.

Inclusions

- Admitted patients aged 18 years and older
- Admitted to a facility with a peer group classification:
  - D1a Community Acute with Surgery
  - D1b Community Acute without Surgery
  - D2 Community Non-Acute
  - F3 Multi-Purpose Services
  - F4 Sub Acute
  - F6 Rehabilitation.

Exclusions

- Facilities where there were fewer than 100 admissions in 2014
- Patients who died during their hospital admission – mode of separation of 6 (Death with autopsy) or 7 (Death without autopsy)
- Acute and post-acute care services
- Patients who are not receiving either acute or rehabilitation care in hospital (Episode of care types 1 and 2)
- Patients who were admitted to a psychiatric unit during the hospital stay
- Patients who gave birth during their admission [Z37.0, Z37.2, O80-O84, procedure code of 90467, 90468, 90469, 90470 or 16520]
- Patients who experienced a stillbirth [Z37.1, Z37.3, Z37.4, Z37.6, Z37.7]
- Admitted for same-day haemodialysis – code 13100-00 in any procedure fields
- Same-day patients who stayed for less than three hours
- Same day patients transerred to another hospital
- Are admitted for a termination of pregnancy procedure [35643-03, 35640-03]

- Have treatment for maltreatment syndromes [T74] in any diagnosis field, including neglect or abandonment, physical abuse, sexual abuse, psychological abuse, other maltreatment syndromes and maltreatment syndrome, unspecified
- Have treatment for contraceptive management [Z30] in any diagnosis field, including general counselling and advice on contraception, surveillance of contraceptive drugs, surveillance of contraceptive device, other contraceptive management and contraceptive management, unspecified
- Patients with a personal history of self-harm [Z91.5] or who have intentionally self-harmed [X60-X84,Y87.0, Y34]
- Patients who experienced pregnancy with an abortive outcome [O00-O08]
- Patients with a family history of mental or behavioural disorders [Z81.8] and patients who have expressed suicidal ideation [R45.81].

Where patients had multiple visits within the sampling month, their most recent hospital stay was kept. The questionnaire asks patients to respond to the survey based on their most recent admission in a particular month.

Phase 2 screening

BHI provides the interim sampling frame to the Health System Information and Performance Reporting Branch (HSIPRB), who add patient name and address information. Data then undergo a second phase of screening. This involves exclusions for administrative/logistical reasons, or where death had been recorded after discharge for the stay used for sample selection but before the final sampling frame is prepared.

Exclusions

The following exclusion criteria are applied in this phase:

- Invalid address (including those with addresses listed as hotels, motels, nursing homes, Community Services, Mathew Talbot hostel, 100 William Street, army quarters, jails, unknown, NFA)
- Invalid name (including twin, baby of, etc.)
- Invalid date of birth
- On the 'do not contact' list
- Sampled in the previous six months for any BHI patient survey currently underway
- Had a death recorded according to the NSW Birth Deaths and Marriages Registry and/or Agency Performance and Data Collection, prior to the sample being provided to Ipsos.

The data following these exclusions are defined by BHI as the final sampling frame.

Drawing of the sample

Survey design

The dataset obtained following Phase 2 screening is referred to as the final sampling frame. It includes eligible patients admitted to public facilities with a peer group classification of D1a, D1b, D2, F3, F4 and F6

(except for APAC services) that reported 100 or more admissions in the state-wide HIE system during the 2014 calendar year.

A stratified sample design was applied, with each facility being defined as a stratum. Simple random sampling without replacement (SRSWOR) applied within each facility.

Although sampling is undertaken monthly, sample sizes are calculated to determine numbers over a 12 month period, as this is the period on which reporting is based.

Calculation of sample sizes and reporting frequency

The monthly sample sizes are determined ahead of time, based on data extracted from the HIE for the previous 12 month period using the same phase 1 screening as is applied during monthly sampling.

Equation 1 is used to estimate the sample size. Values used in this equation aim to provide a sample size that will give a confidence interval of ±0.07 around an expected proportion of 0.8.

$$s_i = \frac{\chi^2 NP(1-P)}{d^2(N_i-1)+\chi^2 P(1-P)} \times \frac{1}{r_i} \tag{1}$$

Where:

s_i = desired sample size for reporting based on sampling for 12 months, for facility i

χ^2 = tabulated value of chi-squared with one degree of freedom at 5% level of significance (3.841)

N_i = population in facility i during the previous year

P = expected proportion giving positive response to the question on satisfaction with overall care (0.8), based on previous levels of response to patient surveys

d = degree of accuracy of the 95% confidence interval expressed as a proportion (±0.07)

r_i = expected response rate in facility i

The estimated sampling size is divided evenly by 12 and provided to HSIPRB as monthly survey targets. For each month of sampling, HSPIRB randomly selects patients within each facility, with the aim of achieving the targets provided by BHI. The desired targets may not be reached in all facilities because the targets are calculated based on historic interim sampling frame data and prior to the phase 2 screening. If the response rate is lower than anticipated or if the prevalence of the variable of interest is between 20 and 80%, the confidence interval may be wider than ±0.07. BHI reserves the right to suppress results where the response rate is lower than a particular level.

Data Management

Data collection

Upon completion of a survey questionnaire, the respondent returns or submits the completed survey (depending on whether they completed the paper-based questionnaire or the online questionnaire) to Ipsos. If a paper form is returned, Ipsos then scans in the answers electronically and manually enters free text fields.

Once all of the data are collated into a single dataset, all names and addresses are removed from the dataset. Also, all text entry fields are checked for potential identifiers (names of patients, names of doctors, telephone numbers, etc.) and any that are found are replaced with "XXXX".

Following this, each record is checked for any errors in completion. Where necessary, adjustments are made such as removing responses where the patient has not correctly followed questionnaire instructions or where the respondent has provided multiple answers to a single response question.

At the end of this process, Ipsos uses a secure NSW Ministry of Health system to transfer the data from their servers to BHI's secure servers, all of which are password protected with limited staff access.

At no stage does BHI, who analyse the data, have access to the names and contact details of the respondents. This ensures respondent answers remain confidential and identifying data can never be publicly released.

Data Analysis

Completeness of survey questionnaires

The level of survey completeness was high overall, with respondents answering, on average, 68 out of the 89 questions. Over 90% of respondents answered at least 60 questions.

Response rate

The overall response rate was 44%, ranging from 37% to 55% at the LHD level and 12% to 61% at hospital level. Response rates at the LHD and facility levels are provided in Tables 4 and 5 respectively, later in the document.

Weighting of data

During the planning phase of the Small and Rural Hospital survey, it was decided against sampling patients by age group and stay type within facilities because the majority of patients in these facilities are in the 49+ age group, and facilities generally do not cater for same day admissions.

Responses from the survey still needed to be weighted to ensure that results at the LHD and state level take into account the different sampling proportions used at the facility level.

Weighting was performed at facility level using equation (2)

$$w_i = \frac{N_i}{n_i} \tag{2}$$

Where:

N_i. denotes the total number of patients eligible for the survey of the ith facility.
The eligible patient numbers are based on the number of patients following the second phase of screening undertaken by the Ministry of Health.

n_i. denotes the number of respondents of the ith facility.

Analysis of weights

As part of the weighting process, an investigation of the weights is undertaken to ensure that undue weight is not applied to individual responses. The two most important factors considered are the ratio of the maximum to median weight, and the design effect. The design effect (DEFF) is estimated as (1+coefficient of variance (weights)^2), and estimates the variance of estimates obtained from the stratified sample used with the variance expected for a simple random sample. Sample sizes, response rates and DEFFs at the LHD and NSW level are shown in Table 4 and sample sizes and response rates at the facility level are shown in Table 5. For this survey, all respondents within a facility will have the same weight.

Table 4: Number of facilities, sample size, response rates and design effects (DEFF) by LHD and overall, SRHS, January to December 2015

LHD	Number of facilities	Surveys Mailed	Survey Responses	Response Rate	DEFF
Central Coast	1	160	70	44%	n/a
Far West	1	146	57	39%	n/a
Hunter New England	16	3150	1429	45%	1.4
Illawarra Shoalhaven	3	503	260	52%	1.1
Mid North Coast	2	363	201	55%	1.2
Murrumbidgee	25	3984	1833	46%	1.3
Nepean Blue Mountains	1	249	138	55%	n/a
Northern NSW	5	810	312	39%	1.1
Northern Sydney	2	456	219	48%	1.0
South Eastern Sydney	2	467	222	48%	1.1
South Western Sydney	1	228	98	43%	n/a
Southern NSW	5	948	451	48%	1.1
St Vincent's Health Network	1	193	83	43%	n/a
Sydney	1	239	97	41%	n/a
Western NSW	22	3661	1338	37%	1.3
Western Sydney	0				
NSW	88	15557	6808	44%	1.3

At the LHD level, the DEFFs are low compared with the Adult Admitted Patient Survey, with the maximum being 1.4. In LHDs that are represented by a single facility (see Table 4) there will be no variability in the weights. The LHDs with the largest DEFFs are those that have a large number of facilities. It is also affected by the range in patient volumes across the facilities within the LHD. In general the increase in standard errors caused by the survey design (and leading to a larger DEFF at LHD level) is more than offset by the fact that each facility that is sampled has sufficient sample size to allow facility-level reporting. In addition, the estimates at the LHD level have appropriate apportionment of respondents between large and small facilities, and there is no need to censor larger weights.

Table 5 also provides the peer group for each facility. For reporting purposes, facilities within peer groups D1a, D1b and D2 were combined, and F4 and F6 were combined, thus resulting in 3 peer groupings in Healthcare Observer.

Table 5 Peer group, sample sizes and response rates by hospital, SRHS, January to December 2015

Hospital	Peer Group	Surveys Mailed	Survey Responses	Response Rate
Balmain Hospital	F4	239	97	41%
Balranald Multi-Purpose Service	D2	146	57	39%
Baradine Multi-Purpose Service	F3	94	49	52%
Barham Health Service	D2	181	84	46%
Barraba Multi-Purpose Service	F3	176	73	41%
Berrigan Multi-Purpose Service	F3	116	51	44%
Bingara Multi-Purpose Service	F3	153	66	43%
Bombala Health Service	F3	150	67	45%
Boorowa Health Service	F3	133	63	47%
Bourke Multi-Purpose Service	F3	236	62	26%
Braeside Hospital	F4	228	98	43%
Braidwood Multi-Purpose Service	F3	67	26	39%
Brewarrina Multi-Purpose Service	F3	155	24	15%
Byron District Hospital	D1b	247	87	35%
Calvary Health Care Sydney	F4	246	126	51%
Canowindra Soldiers' Memorial Hospital	D2	221	120	54%
Cobar District Hospital	D1b	239	70	29%
Coledale Hospital	F4	142	79	56%
Condobolin District Hospital	D1b	223	72	32%
Coolah Multi-Purpose Service	F3	86	42	49%
Coolamon Multi-Purpose Service	F3	130	60	46%
Coonabarabran District Hospital	D1b	237	112	47%
Coonamble Multi-Purpose Service	D2	226	68	30%
Cootamundra Health Service	D1a	257	120	47%
Corowa Health Service	D1a	246	129	52%
Crookwell Health Service	D2	238	129	54%
Culcairn Multi-Purpose Service	F3	101	47	47%
David Berry Hospital	F4	151	82	54%
Dorrigo Plateau Multi-Purpose Service	F3	104	50	48%
Dunedoo War Memorial Multi-Purpose Service	F3	67	36	54%
Dungog District Hospital	D2	205	125	61%
Finley Health Service	D1b	227	110	48%
Gilgandra Multi-Purpose Service	F3	210	100	48%
Glen Innes District Hospital	D1a	247	96	39%
Gloucester Soldier's Memorial Hospital - Hospital Unit	D1a	249	150	60%
Greenwich Hospital	F4	231	97	42%
Grenfell Multi-Purpose Service	F3	127	58	46%
Gulgong Health Service	D1b	65	34	52%
Gundagai Health Service	D2	237	95	40%
Guyra Multi-Purpose Service	F3	171	73	43%
Hay Health Service	D2	155	54	35%
Henty Multi-Purpose Service	F3	90	50	56%
Hillston Health Service	D2	88	37	42%
Holbrook Health Service	D1b	61	34	56%
Jerilderie Multi-Purpose Service	F3	65	31	48%
Junee Multi-Pupose Service	F3	121	51	42%
Kyogle Multi-Purpose Service	F3	239	99	41%
Lake Cargelligo Multi-Purpose Service	F3	118	44	37%
Leeton Health Service	D1a	249	107	43%
Lightning Ridge Multi-Purpose Service	F3	154	49	32%
Lockhart Health Service	D2	82	38	46%

Hospital	Peer Group			
Manilla Multi-Purpose Service	D2	211	96	45%
Mercy Care Centre, Young	F4	107	61	57%
Mullumbimby & District War Memorial Hospital	D1b	248	100	40%
Murrumburrah-Harden Health Service	D1b	197	101	51%
Narrandera Health Service	D1a	247	111	45%
Narromine District Hospital	D2	220	91	41%
Nimbin Multi-Purpose Service	F3	50	19	38%
Nyngan Multi-Purpose Service	F3	120	35	29%
Oberon Multi-Purpose Service	F3	168	75	45%
Pambula District Hospital	D1a	258	134	52%
Peak Hill Hospital	D2	84	38	45%
Port Kembla District Hospital	F4	210	99	47%
Prince Albert Memorial, Tenterfield	D1b	224	92	41%
Quirindi Community Hospital	D1b	195	75	38%
Royal Rehabilitation Hospital - Coorabel/Moorong	F6	225	122	54%
Rylstone Multi-Purpose Service	F3	127	58	46%
Scott Memorial Hospital, Scone	D1a	260	129	50%
Springwood Hospital	D1a	249	138	55%
St Joseph's Hospital, Auburn	F4	193	83	43%
Temora Health Service	D1a	245	113	46%
Tocumwal Health Service	D2	167	79	47%
Tomaree Community Hospital	D1b	246	120	49%
Tumbarumba Multi-Purpose Service	F3	127	62	49%
Urbenville and District Multi-Purpose Service	F3	26	7	27%
Walcha Multi-Purpose Service	F3	158	75	47%
Walgett District Hospital	D1b	225	28	12%
War Memorial Hospital, Waverley	F6	221	96	43%
Warialda Multi-Purpose Service	F3	195	86	44%
Warren Multi-Purpose Service	F3	144	39	27%
Wauchope District Memorial Hospital	D1a	259	151	58%
Wee Waa District Hospital	D1b	224	52	23%
Wellington Hospital, Bindawalla	D1b	233	78	33%
Wilson Memorial Hospital, Murrurundi	D2	99	45	45%
Wingham Memorial Hospital	F6	137	76	55%
Woy Woy Hospital	D2	160	70	44%
Wyalong Health Service	D1b	237	101	43%
Yass Health Service	D1b	235	95	40%

Demographic characteristics of respondents to SRHS

One of the aims of weighting is to ensure that after weighting the characteristics of the respondents closely reflect the characteristics of the patient population. Table 6 shows the percentages by actual patient volumes as well as for the unweighted and weighted survey results, by various demographic breakdowns.

Two patient population figures are shown. The first column refers to the patient population prior to the phase 2 screening process. The second column refers to the eligible patient population, from which the sample was selected.

The weighted percentage of respondents in each LHD and peer group is consistent with the proportions in the eligible patient population. It should be noted that the proportion of respondents in the 18-49 year age strata is less than half of the proportion in the eligible population, whether weighted or unweighted. This is

partly due to a much lower response rate for younger patients. A similar effect is observed for Aboriginal patients.

Table 6 Demographic characteristics of patients and SRHS respondents, January to December 2015

Demographic variable	Sub-group	% in patient population	% in MoH* eligible population	% in respondents (unweighted)	% in respondents (weighted)
LHD	Central Coast	1	1	1	1
	Far West	1	0	1	0
	Hunter New England	21	23	21	23
	Illawarra Shoalhaven	2	2	4	2
	Mid North Coast	4	5	3	5
	Murrumbidgee	26	24	27	24
	Nepean Blue Mountains	2	2	2	2
	Northern NSW	6	5	5	5
	Northern Sydney	3	3	3	3
	South Eastern Sydney	4	5	3	5
	South Western Sydney	1	1	1	1
	Southern NSW	7	6	7	6
	St Vincent's Health Network	1	1	1	1
	Sydney	2	2	1	2
	Western NSW	19	18	20	18
Peer group	D1a	31	34	20	34
	D1b	24	22	20	22
	D2	13	13	18	13
	F3	18	15	25	15
	F4	11	12	12	12
	F6	3	4	4	4
Age stratum	18-49	20	.	8	9
	50+	80	.	92	91
Stay type	Overnight	71	.	81	74
	Same day	29	.	19	26
Aboriginal staus	Not Aboriginal	93	.	98	97
	Aboriginal and/or Torres Strait Islander	7	.	2	3
Gender	Male	46	.	45	44
	Female	54	.	55	56

*MOH = NSW Ministry of Health; only information required for sampling is provided by MoH

Reporting

Confidentiality

BHI does not does not receive any confidential patient information. The process of mailing surveys and collation of responses are carried out by Ipsos Social Research Institute (Ipsos) on behalf of BHI. All personal identifiers, such as name, address etc., are removed from the data before it is provided to BHI.

To further ensure that respondents are not identifiable, BHI only publishes results that include a minimum of 30 respondents. For facilities or LHDs where there are too few respondents, results are suppressed. Only aggregated data are published – unit record data are never published in BHI reports.

Statistical Analysis

Data were analysed for the period from January to December 2015. Analysis was undertaken in SAS V9.4 using the SURVEYFREQ procedure, with hospital as a stratum. Results were weighted for all questions except for questions related to socio-demographic characteristics and self-reported health.

Results were generated for each question in the survey

- At NSW level, and by LHD, peer group and hospital

- Within each of these, by the following demographic characteristics:

Characteristic	Comment
Age group	18-34,35-54,55-74,75+, based on self-report. Where question on year of birth is missing or invalid, administrative age was used
Self-reported gender	Where question on sex is missing or invalid, administrative data used
Education	Response "Still at secondary school" was combined with "Less than Year 12"
Country of birth	
Main language spoken at home	
Rurality of hospital (NSW only)	Based on Remoteness category of location of facility
Long-standing health conditions	Dichotomised as reported a health condition or none reported
Aboriginal status	Self-reported, dichotomised into Aboriginal and/or Torres Strait Islander or neither. Missing values were excluded rather than imputed from administrative source
Self-reported health	
Quintile of socio-economic disadvantage	Refer to the Data Dictionary: Quintile of socio-economic disadvantage
Rurality of patient residence	Based on Remoteness category of postcode of respondent

For a detailed breakdown of the proportion of missing or 'Don't know' responses for each question, refer to Appendix 1.

Typically, for questions that are related to hospital performance, missing values and 'Don't know/can't remember'-type responses are excluded. The exception is for 'Don't know/can't remember' responses for

questions that ask about a third party (e.g. if family had enough opportunity to talk to doctor) or that are over 10%.

Meanwhile, questions that are not related to hospital performance include results for people who responded 'Don't know/can't remember' and those who should have answered the question but did not. Results are presented only where the result was based on at least 30 respondents.

Confidence intervals

Confidence intervals can be displayed in Healthcare Observer for the most positive response option for questions related to hospital performance (with the exception of questions experiencing complications, where confidence intervals are shown for the least positive response option). 95% confidence intervals are based on modified Clopper-Pearson (exact) confidence limits for proportions, as calculated in SAS during the SURVEYFREQ procedure.

The BHI document, "Guide to Interpreting Differences" provides additional information in understanding comparison of results.

Some differences in results between hospitals may be due to differences in the demographic profile of patients attending those facilities. BHI is currently developing methods to standardise survey results in order to account for differences in patient mix and to optimise direct comparisons.

Appendix 1: Percentage of missing and 'Don't know' responses

These data are sourced from the Small and Rural Hospitals Survey, January to December 2015. Data are unweighted.

	Question text	Missing	Don't know	Missing + Don't know
		%	%	%*
1	Why did you go to the hospital named on the cover of this booklet?	9.1		9.1
2	From the time a doctor said you would need to go to hospital, how long did you have to wait to be admitted?	7.6	3.0	10.6
3	Do you think the amount of time you waited was…?	6.3	1.9	8.2
4	Before your arrival, how much information about your hospital stay was provided to you by the hospital?	6.4	7.1	13.5
5	Were the staff you met on your arrival to this hospital polite and courteous?	1.4	1.2	2.7
6	Do you think the time you had to wait from arrival at this hospital until you were taken to your room or ward was...?	2.4	3.0	5.4
7	How clean were the wards or rooms you stayed in while in this hospital?	1.6		1.6
8	How clean were the toilets and bathrooms that you used while in this hospital?	2.1		2.1
9	Did you see nurses wash their hands, or use hand gel to clean their hands, before touching you?	2.7	9.4	12.2
10	Did you see doctors wash their hands, or use hand gel to clean their hands, before touching you?	3.6	12.3	15.9
11	Were you given enough privacy when being examined or treated?	2.7		2.7
12	Were you given enough privacy when discussing your condition or treatment?	4.2		4.2
13	Did you have any hospital food during this stay?	3.5		3.5
14	How would you rate the hospital food?	2.5		2.5
15	Did you have any special dietary needs (e.g. vegetarian, diabetic, food allergies, religious, cultural, or related to your treatment)?	3.7		3.7
16	Was the hospital food suitable for your dietary needs?	4.7	0.5	5.2
17	Did you need help from staff to eat your meals?	3.6		3.6
18	Did you get enough help from staff to eat your meals?	3.2		3.2
19	Were you treated by a doctor during your stay in this hospital?	3.3	1.5	4.8
20	If you needed to talk to a doctor, did you get the opportunity to do so?	3.5		3.5
21	When you had important questions to ask a doctor, did they answer in a way you could understand?	3.8		3.8
22	In your opinion, did the doctors who treated you know enough about your medical history?	4.6		4.6
23	If you needed to talk to a nurse, did you get the opportunity to do so?	2.2		2.2
24	When you had important questions to ask a nurse, did they answer in a way you could understand?	2.6		2.6
25	In your opinion, did the nurses who treated you know enough about your care and treatment?	2.9		2.9
26	Did nurses ask your name or check your identification band before giving you any medications, treatments or tests?	2.8	3.0	5.8
27	During your stay in this hospital, how much information about your condition or treatment was given to you?	3.0		3.0

#	Question			
28	Did you have worries or fears about your condition or treatment while in this hospital?	3.2		3.2
29	Did a health professional discuss your worries or fears with you?	4.2		4.2
30	Were you involved, as much as you wanted to be, in decisions about your care and treatment?	3.4		3.4
31	If your family or someone else close to you wanted to talk to a health professional, did they get the opportunity to do so?	2.5	3.4	5.9
32	How would you rate how well the health professionals worked together?	1.8		1.8
33	Did you ever receive conflicting information about your condition or treatment from health professionals?	2.9		2.9
34	If you needed assistance, were you able to get a member of staff to help you within a reasonable timeframe?	1.9		1.9
35	Was a call button placed within easy reach?	1.6	1.7	3.3
36	Did you feel you were treated with respect and dignity while you were in this hospital?	1.7		1.7
37	Were you ever treated unfairly for any of the reasons below?	7.0		7.0
38	Did you have confidence and trust in the health professionals treating you?	2.8		2.8
39	Were the health professionals kind and caring towards you?	2.5		2.5
40	Overall, how would you rate the health professionals who treated you?	2.4		2.4
41	While in this hospital, did you receive or see any information about how to comment or complain about your care?	4.1	28.8	33.0
42	During your stay in this hospital, did you have any tests, x-rays or scans?	2.9		2.9
43	Did a health professional in this hospital discuss the purpose of these tests, x-rays or scans with you?	7.4		7.4
44	Were you ever in any pain while in this hospital?	2.3		2.3
45	Do you think the hospital staff did everything they could to help manage your pain?	3.4		3.4
46	During your stay at this hospital, were you sent to another healthcare facility for tests or treatment before returning to this hospital?	3.6		3.6
47	How long did you stay at the other healthcare facility before returning to this hospital?	4.9	3.3	8.2
48	What was the reason you were sent to the other healthcare facility?	2.3		2.3
49	Did you experience any of the following issues when being taken to the other healthcare facility?	6.1		6.1
50	In your opinion, was your relevant medical information provided to the healthcare professionals at this other facility?	1.4	10.2	11.7
51	Not including the reason you came to hospital, during your hospital stay, or soon afterwards, did you experience any of the following complications or problems?	8.4		8.4
52	Was the impact of this complication or problem...?	5.4		5.4
53	In your opinion, were members of the hospital staff open with you about this complication or problem?	6.2		6.2
54	At the end of your stay in this hospital, where did you go?	3.6		3.6
55	Did you feel involved in decisions about your discharge from this hospital?	2.4		2.4
56	Thinking about when you left this hospital, were you given enough information about how to manage your care at home?	1.9		1.9
57	Did hospital staff take your family and home situation into account when planning your discharge?	2.2	1.9	4.1
58	Thinking about when you left this hospital, were adequate arrangements made by the hospital for any services you needed?	2.4		2.4
59	Did hospital staff tell you who to contact if you were worried about your condition or treatment after you left hospital?	2.7	7.6	10.3
60	Were you given or prescribed any new medication to take at home?	1.6		1.6
61	Did a health professional in this hospital explain the purpose of this medication in a way you could understand?	3.8		3.8
62	Did a health professional in this hospital tell you about medication side effects to watch for?	4.5		4.5

No.	Question			
63	Did you feel involved in the decision to use this medication in your ongoing treatment?	4.1		4.1
64	Did you experience any of the following problems regarding your medication?	7.0		7.0
65	On the day you left this hospital, was your discharge delayed?	1.2		1.2
66	How long was the delay? [in discharge]	3.9	4.4	8.4
67	Did a member of staff explain the reason for the delay? [in discharge]	5.0		5.0
68	What were the main reasons for the delay? [in discharge]	5.2	4.7	9.9
69	How much money (that you will not get back) did you pay for expenses related to your hospital stay (e.g. hospital costs, transport, accommodation for you or those accompanying you)?	5.9	4.4	10.3
70	Overall, how would you rate the care you received while in this hospital?	1.9		1.9
71	How well organised was the care you received in this hospital?	2.0		2.0
72	If asked about your hospital experience by friends and family how would you respond?	2.4		2.4
73	Did you want to make a complaint about something that happened in this hospital?	3.6		3.6
74	Why didn't you make a complaint?	3.3		3.3
75	Did the care and treatment received in hospital help you?	3.0		3.0
76	Is the problem you went to hospital for...?	4.1		4.1
77	In the week before your hospital stay, how difficult was it for you to carry out your normal daily activities (e.g. physical activity, going to work, caring for children)?	5.7		5.7
78	About one month after your discharge from hospital, how difficult was it for you to carry out your normal daily activities?	5.1		5.1
79	In the month following your discharge, did you go to an emergency department because of complications that occurred during your recovery?	4.7	1.2	5.9
80	In the month following your discharge, were you readmitted to any hospital because of complications that occurred during your recovery?	4.4	1.0	5.5
81	What year were you born?	4.5		4.5
82	What is your gender?	2.0		2.0
83	Highest level of education completed	8.0		8.0
84	Language mainly spoken at home	2.2		2.2
85	Aboriginal and/or Torres Strait Islander	5.0		5.0
86	Which, if any, of the following long-standing conditions do you have (including age related conditions)?	5.7		5.7
87	In general, how would you rate your health?	2.8		2.8
88	Who completed this survey?	2.4		2.4

* Percentages for this column may not equal the sum of the "Missing %" and "Don't know %" columns because they were calculated using unrounded figures.

For respondents who did not answer these questions, information about age and gender were substituted with age and sex fields from administrative data (from the Health Information Exchange).

Appendix 2: Derived measures

Definition

Derived measures are those for which results are calculated indirectly from respondents' answers to a survey question. These tend to be from questions that contain a 'not applicable' type response option and are used to gather information about the array of patients' needs.

Derived measures involve the grouping together of more than one response option to a question. The derived measure 'Quintile of Disadvantage' is an exception to this rule (for more information on this, please see the appropriate Data Dictionary for this measure).

Statistical methods

Results are expressed as the percentage of respondents who chose a specific response option or options for a question. The reported percentage is calculated as the numerator divided by the denominator (see definitions below).

Results are weighted as described in this report.

Numerator

The number of survey respondents who selected a specific response option or specific response options to a certain question, minus exclusions.

Denominator

The number of survey respondents who selected any of the response options to a certain question, minus exclusions.

The following questions and responses were used in the construction of the derived measures.

Derived Measure	Actual question text (in 2015 SRHS)	Derived Measure Categories	Actual Question Responses
Needed to talk to a doctor	Q20. If you needed to talk to a doctor, did you get the opportunity to do so?	• Needed to talk to doctor	• Yes, always • Yes, sometimes • No, I did not get the opportunity
		• No need to talk to doctor	• I had no need to talk to a doctor
Had important questions to ask a doctor	Q21. When you had important questions to ask a doctor, did they answer in a way you could understand?	• Asked doctor questions	• Yes, always • Yes, sometimes • No, I did not get answers I could understand
		• Didn't ask any questions	• I did not ask any questions
Needed to talk to a nurse	Q23. If you needed to talk to a nurse, did you get the opportunity to do so?	• Needed to talk to nurse	• Yes, always • Yes, sometimes • No, I did not get the opportunity
		• No need to talk to nurse	• I had no need to talk to a nurse
Had important questions to ask a nurse	Q24. When you had important questions to ask a nurse, did they answer in a way you could understand?	• Asked nurse questions	• Yes, always • Yes, sometimes • No, I did not get answers I could understand
		• Didn't ask any questions	• I did not ask any questions
Wanted information about condition or treatment during stay	Q27. During your stay in this hospital, how much information about your condition or treatment was given to you?	• Wanted information	• Not enough • The right amount • Too much
		• Not applicable	• Not applicable to my situation
Wanted to be involved in decisions about care and treatment	Q30. Were you involved, as much as you wanted to be, in decisions about your care and treatment?	• Wanted involvement	• Yes, definitely • Yes, to some extent • No
		• Didn't want involvement	• I was not well enough • I did not want or need to be involved

Derived Measure	Actual question text (in 2015 SRHS)	Derived Measure Categories	Actual Question Responses
Had family/someone close who wanted to talk to health professional	Q31. If your family or someone else close to you wanted to talk to a health professional, did they get the opportunity to do so?	• Wanted to talk to health professional	• Yes, definitely • Yes, to some extent • No, they did not get the opportunity
		• Not applicable	• Not applicable to my situation • Don't know/can't say
Needed assistance while in hospital	Q34. If you needed assistance, were you able to get a member of staff to help you within a reasonable timeframe?	• Needed assistance	• All of the time • Most of the time • Some of the time • Rarely • Never
		• Didn't need assistance	• I did not need assistance
Experienced complication or problem during or shortly after hospital stay (derived measure)	Q51. Not including the reason you came to hospital, during your hospital stay, or soon afterwards, did you experience any of the following complications or problems?	• Experienced complication	• An infection • Uncontrolled bleeding • A negative reaction to medication • Complications as a result of an operation or surgical procedure • Complications as a result of tests, x-rays or scans • A blood clot • A pressure wound or bed sore • A fall • Any other complication or problem
		• None reported	• None of these • Missing
Complication or problem occurred during hospital stay	Q53. In your opinion, were members of the hospital staff open with you about this complication or problem?	• Occurred in hospital	• Yes, completely • Yes, to some extent • No
		• Occurred after left	• Not applicable, as it happened after I left
Wanted to be involved in decisions about their discharge	Q55. Did you feel involved in decisions about your discharge from this hospital?	• Wanted involvement	• Yes, definitely • Yes, to some extent • No, I did not feel involved
		• Didn't want involvement	• I did not want or need to be involved
Needed information on	Q56. Thinking about when you left this hospital, were	• Needed information	• Yes, completely • Yes, to some extent

Derived Measure	Actual question text (in 2015 SRHS)	Derived Measure Categories	Actual Question Responses
how to manage care at home	you given enough information about how to manage your care at home?		• No, I was not given enough
		• Didn't need information	• I did not need this type of information
Needed family and home situation taken into account when planning discharge	Q57. Did hospital staff take your family and home situation into account when planning your discharge?	• Had situation to consider	• Yes, completely • Yes, to some extent • No, staff did not take my situation into account
		• Not necessary	• It was not necessary
Needed services after discharge	Q58. Thinking about when you left this hospital, were adequate arrangements made by the hospital for any services you needed?	• Needed services	• Yes, completely • Yes, to some extent • No, arrangements were not adequate • These services are not offered in the area
		• Didn't need services	• It was not necessary
Wanted to be involved in decision to use medication in ongoing treatment	Q63. Did you feel involved in the decision to use this medication in your ongoing treatment?	• Wanted involvement	• Yes, completely • Yes, to some extent • No, I did not feel involved
		• Didn't want involvement	• I did not want or need to be involved

Exclusions

For derived measures, the following are excluded:

- Response: 'don't know/can't remember' or similar non-committal response (with the exception of questions where the rate of this response was over 10% and questions that refer to the experience of a third party such as a family/carer)
- Response: invalid (i.e. respondent was meant to skip a question but did not)
- Response: missing (with the exception of questions that allow multiple responses or a 'none of these' option, to which the missing responses are combined to create a 'none reported' variable).

Interpretation of indicator

The higher the percentage, the more respondents fall into that response category.