bureau of health information

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Please note that there is the potential for minor revisions of information in this report. Please check the online version at www.bhi.nsw.gov.au for any amendments.

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 co-ordinated 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 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 2015-16 Emergency Department Patient Survey (EDPS).

For more information on how to interpret results and statistical analysis of differences between hospitals, LHDs or NSW, please refer to the "Guide to Interpreting Differences" at www.bhi.nsw.gov.au/nsw_patient_survey_program.

The Emergency Department Patient Survey

In 2013, the EDPS was the second survey to be sent to patients as part of the revised NSW Patient Survey Program, after the Adult Admitted Patient Survey. In 2014, the EDPS was conducted for the second time, covering the period of April 2014 to March 2015. In 2015, the EDPS was conducted for the third time, covering the period of April 2015 to March 2016.

Significant changes were made to the questionnaire content between the 2013-14 and 2015-16 questionnaire versions. These changes were made to improve navigation through the questionnaire and in response to the latest stakeholder needs. These changes were informed by an analysis of 2013/14 results, specifically item non-response to survey questions, percentage of invalid responses to questions, floor and ceiling effects (based on the mean, standard deviation and skewness of results), and correlation to other questions in the questionnaire.

Changes were also made to the sampling for the survey due to lower response rates seen for younger patients in the EDPS. In order to ensure that sufficient numbers of younger patients were responding to allow reporting, the proportion of younger patients sampled in the survey was increased. It was expected that, while this would have a negative impact on unadjusted response rates, it would improve the overall representativeness of respondents to the survey.

Organisational roles in producing survey samples

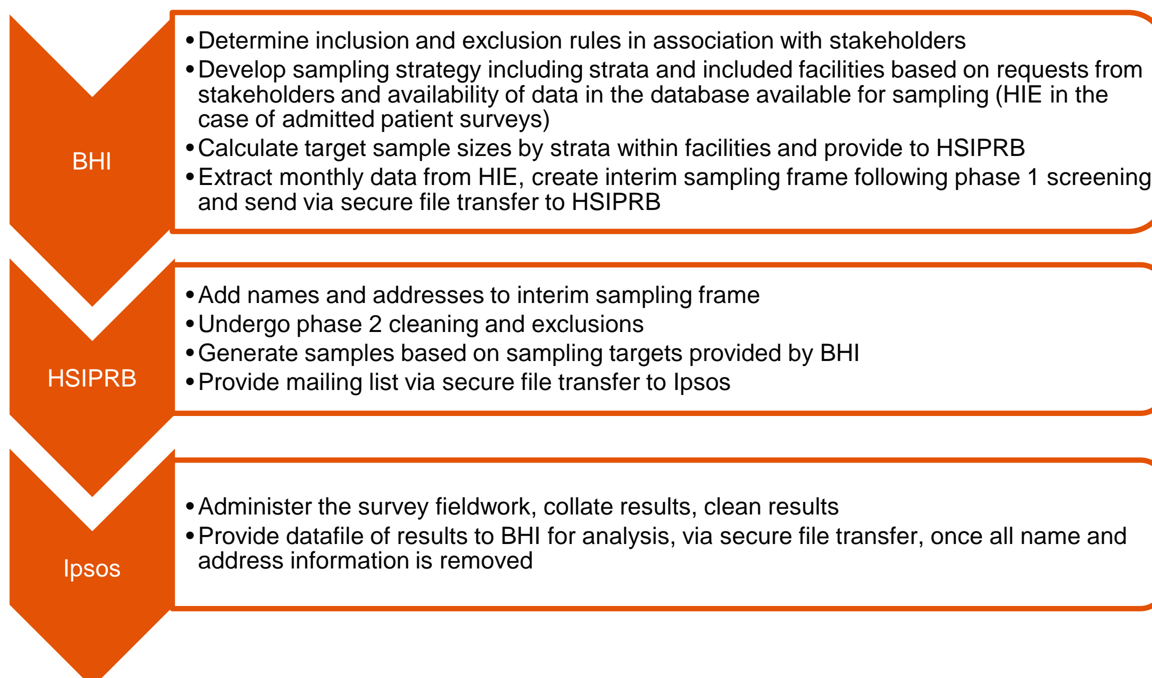
The survey program assures patients that their responses will be confidential and that staff at hospitals will not be able to determine who gave which response. BHI does this through a number of mechanisms, including:

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

The sampling method for the NSW Patient Survey Program requires collaboration between staff at BHI, Ipsos SRI and the Ministry of Health's Health Systems Performance Information and Reporting Branch (HSPIRB) (see Figure 1). This survey used data obtained from the Health Information Exchange (HIE).

BHI has access to confidentialised 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 EDPS, sampling frames are defined separately for each month, with the date of emergency department (ED) attendance is 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, Emergency Department Patient Survey, 2015-16



Inclusion criteria

Phase 1 screening

Emergency department patient data pass through two phases of cleaning. The first phase of screening is applied by BHI. Many of these criteria are developed in conjunction with advice of stakeholders.

Inclusions

- Patients who visited an emergency department in a NSW public hospital with a peer group classification of A1, A2, A3, B, C1 or C2.

Exclusions

- Patients who were dead on arrival or died in ED (mode of separation of 8 and 3 respectively) were excluded from the sample.

A series of further exclusion criteria were applied to 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; certain patients' ability to answer questions about their experiences; and the relevance of the survey questions to particular patient groups.

The effectiveness of this screening is reduced for the EDPS compared to the Adult Admitted Patient Survey (AAPS) due to the variables in the dataset. For example, the ED dataset does not contain robust diagnosis (ICD-10-AM) information that allows these exclusions. Because of this, further screening to exclude sensitive groups can only be done for patients subsequently admitted to hospital. In addition, ED patients subsequently admitted to hospital (mode of separation of 1,10,11,12 or 13) with the following procedures or diagnoses that were recorded for their inpatient stay were omitted:

- admitted for a termination of pregnancy procedure [35643-03];
- treated 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;
- treated 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 diagnosis of stillborn baby [Z37] in any diagnosis field (including single stillbirth, twins, one liveborn and one stillborn, twins, both stillborn and other multiple births, some liveborn) were excluded.
- In addition, where ED patients were admitted to hospital, they were excluded if in the subsequent admission they had a mode of separation of death.

From October 2014, the following additional exclusions were applied:

- Intentional self-harm: ICD10 code between X60 and X84
- Sequelae of intentional self-harm: ICD10 code = Y87.0
- Unspecified event, undetermined intent: ICD10 code commences with Y34
- Suicidal ideation: ICD10 code = R45.81
- Family history of other mental and behavioural disorders: ICD10 code commences with Z81.8

- Personal history of self-harm: ICD10 code commences with Z91.5.

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

Phase 2 screening

BHI provides the interim sampling frame to 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

- 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

A stratified sample design was applied, with each facility defined as a stratum. Within each facility, patients are further stratified by the following variables:

- Age – aged 0-17, 18-49 or 50 years and over, based on the age variable.

Although sampling is undertaken monthly, sample size calculations are based on whether reporting is on a quarterly or annual basis. All facilities in C1 or C2 peer groups were sampled for annual reporting, whereas facilities in the remaining peer groups were sampled for quarterly reporting. For the purposes of sampling, the population of Sydney and Sydney Eye Hospitals were combined. In addition:

- all patients at the two children's hospitals were included in the 'under 18' stratum for sampling purposes
- children under 18 years admitted to A3 (Ungrouped Acute - tertiary referral) facilities were included in the '18 to 49' age stratum because of very small numbers in the under 18 age group for these three hospitals.

Patients were selected within strata using simple random sampling without replacement. Sample sizes were defined at the facility level (or by patient type as described within the next section), with proportional sampling of strata within facilities/patient types.

The monthly targets by strata for the 2015-16 sampling period were based on the emergency department patient data from 2013 (after Phase 1 of the screening process).

The required sample size for each facility (i) within reporting stratum (j) was estimated using Equation 1.

Equation 1

$$s_{ij} = \frac{\chi^2 N_{ij} P(1-P)}{d^2(N_{ij}-1) + \chi^2 P(1-P)}$$

Where:

s_{ij} = estimated sample size for facility i and stratum j

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

N_{ij} = population in the reporting stratum j of facility i, estimated using data from the 2013 calendar year with phase 1 exclusion criteria applied, aggregated to correspond with the reporting period (i.e. by quarter or full year)

P = expected proportion giving the most 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).

The sample size calculation aimed for a confidence interval around an expected proportion of 0.8 of ±0.07 at the reporting strata level within each facility. Sample sizes were then allocated proportionately across strata internal to these reporting strata.

Finally, cell sample sizes are increased to account for fewer than 100% of patients responding to the survey. This was done by dividing the expected sample size by the expected response rate. Response rates for each stratum was estimated based on response rates observed in the 2013-14 survey (Table 1):

Table 1: Response rates used when calculating the targets for mailing, EDPS 2015-16

Stratum	Quarterly reporting (A and B peer groups)	Annual reporting (C peer groups)
0-17 years	30%	25%
18-49 years	25%	20%
50+ years	55%	50%

In addition, monthly mailing targets were changed from variable (depending on expected monthly patient numbers) to fixed monthly numbers (based on annual sample sizes divided by 12 months). A minimum monthly target of four patients was applied to all strata (e.g. if calculations require one, two or three patients in any stratum, this will be increased to four patients).

The adjusted sample sizes file was provided to HSIPRB as the targets for the 2015-16 survey. For each month of sampling, HSPIRB randomly selected patients within each stratum, according to mailing targets provided by BHI.

Notes:

- The sample size calculation based on Equation 1 (page 7) assumes simple random sampling, whereas a stratified survey design was used. This, and differences in the response rate between strata, may result in some estimates having wider confidence intervals than expected, even when the prevalence is 80%.
- For the purposes of sampling and reporting, the population of Sydney and Sydney Eye Hospitals were combined as one facility.

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 is 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 and reasonable adjustments (known as ‘cleaning’) are made to the dataset, for example, removing responses where the patient has not correctly followed questionnaire instructions or providing 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 do 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

In EDPS 2015-16, the completeness of responses was very high, with 99% of respondents answering one to 77 questions, out of the 95 questions in the questionnaire.

Calculation of weighted response rate

The response rate is the proportion of people sampled in the survey that actually completed and returned their survey form. As a result of the oversampling of younger patients, the distribution of patients in the sample (patients who were sent questionnaires) does not match the age distribution of patients in the population (Table 2). Therefore, response rates were adjusted to ensure that the overall survey response rate reflects a response rate that would be observed if patients were sampled proportional to the patient mix, creating the 'weighted response rate'. The weighted response rates are shown in Tables 4 and 5 in the following sections.

Table 2: Patient population distribution and corresponding number of surveys mailed, EDPS 2015-16

Age group	Percentage in patient pop	Percentage in sample	Percentage in respondents
0-17	27%	26%	28%
18-49	38%	38%	28%
50+	35%	36%	44%

Weighting of data

The protocol of the NSW Patient Survey Program is, when possible, to 'weight' data to account for differences (bias) in the probability of sampling and the likelihood of different patient groups to respond. Weighting makes the results more representative of the overall patient population, making the data more useful for the purposes of decision-making and service improvement.

Weights were calculated in two stages. Weights are calculated for each quarter of data as they become available. Once 12 months of data were available, weights for facilities reported on an annual basis was adjusted, to better reflect patient populations (which was difficult to do due to smaller numbers of respondents at the quarterly level).

Weighting of quarterly data

For each quarter of data, responses were weighted to match the population by age (Under 18, 18–49 or 50+ years) and visit type (admitted or non-admitted emergency).

Data were weighted at facility level for hospitals that were sampled for quarterly reporting (peer group hospitals A1, A2, A3 and B) and at LHD level for hospitals that were sampled for annual reporting (peer group hospitals C1 and C2). Methods for weighting are described in the following pages.

Calculating quarterly response weights

Interim quarterly response weights were calculated as:

$$w_{ij} = \frac{N_{ij}}{n_{ij}} \qquad (1)$$

where:

N_{ij} denotes the population (i.e. total number of patients eligible for the survey) of the ith facility in the jth age group. Eligible patient numbers were based on the number of patients following the second phase of screening undertaken by the Ministry of Health.

n_{ij} denotes the sample size (i.e. number of respondents) of the ith facility in the jth age group.

If the stratum cell size within a facility was five or fewer, then cells within that facility were aggregated for weighting purposes by grouping across age group.

The interim quarterly weights were then passed through the GREGWT macro, a survey-specific SAS program developed by the ABS to assist with weighting of complex survey data[1]. It uses iterative proportional fitting to ensure that the weights at the margins agreed with the population totals even though it is often impossible for the weights to equal the population at the individual cell level. The marginal totals specified were:

- Benchmark 1: Facility (with annually-reported facilities within the same LHD combined)
- Benchmark 2: Peer group
- Benchmark 3: Peer group (with C1 and C2 facilities combined) x age (with some strata combined – see below)
- Benchmark 4: Peer group (with C1 and C2 facilities combined) x visit type

For Benchmark 3, age strata were combined for cells where there were very few respondents. These cells were combined, within each facility, as follows:

- Across all age groups for all admitted patients
- Across all age groups in C facilities in FWLHD (Quarter 2 only)
- Across Under 18 and 18-49 age groups in C facilities in FWLHD in (Quarters 3 and 1 only)

[1] Bell, P. (2000) *Weighting and Standard Error Estimation for ABS Household Surveys*, Australian Bureau of Statistics Methodology Advisory Committee Paper. Canberra.

- Across Under 18 and 18-49 age groups in C facilities in WSLHD in (Quarter 3 only)

A lower bound of one was specified in the macro. Each quarter of data was weighted separately using this process. Interim quarterly weights were used as initial response weights. Weights generated using the GREGWT macro were trimmed to 400 to avoid extreme weights.

Once four quarters of data were available, these were aggregated and the weights for facilities sampled on the basis of annual reporting were adjusted to allow reporting at the facility level. The GREGWT macro was used, in two stages, to ensure agreement of weights with populations at the margins.

Firstly, interim annual weights were calculated for the facilities sampled on the basis of annual reporting, by using the GREGWT macro with the following benchmarks.

- Benchmark 1: Facility x age stratum
- Benchmark 2: Quarter x LHD
- Benchmark 3: Quarter x age stratum
- Benchmark 4: Quarter x peer group

A lower bound of one was specified in the macro. The interim quarterly weights were used as initial response weights.

In the second stage, annual response weights were adjusted to account for disproportionate sampling of admitted emergency patients (which occurred, inadvertently, during sampling) using the GREGWT macro.

For the final annual weights, the margins were specified as follows:

- Benchmark 1: Quarter x facility (with annually-reported facilities within the same LHD combined)
- Benchmark 2: Peer group
- Benchmark 3: LHD
- Benchmark 4: Facility
- Benchmark 5: Age stratum
- Benchmark 6: Visit type
- Benchmark 7: Peer group x age stratum
- Benchmark 8: Peer group x visit type
- Benchmark 9: LHD x age stratum
- Benchmark 10: LHD x visit type
- Benchmark 11: Facility x age stratum
- Benchmark 12: Facility x visit type (with annually-reported facilities combined)

A lower bound of one was specified in the macro. Interim annual weights generated in the first stage were used as initial response weights. Weights generated using the GREGWT macro were trimmed to 400 to avoid extreme weights.

Analysis of weights

As part of the weighting process, an investigation of the weights is undertaken for each quarter separately 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, particularly at the facility level, and the design effect.

The design effect (DEFF) was calculated for each LHD and overall, for each quarter and for the four quarters combined. The DEFF, estimated as (1+coefficient of variance (weights)^2), compares the variance of estimates obtained from the stratified sample used with the variance expected for a simple random sample. Sample sizes, weighted response rates and DEFFs based on the 12 months of data are shown in Table 3 (by LHD and NSW) and Table 4 (by facility).

Table 3: Sample size, response rates and design effects (DEFF) by LHD and overall, EDPS 2015-16

LHD	Surveys Mailed	Survey Responses	Weighted response rate	DEFF
Central Coast	3811	881	30%	1.2
Far West	1899	269	20%	1.3
Hunter New England	16931	3572	25%	1.5
Illawarra Shoalhaven	5795	1351	28%	1.3
Mid North Coast	5506	1341	30%	1.5
Murrumbidgee	4811	1042	25%	1.7
Nepean Blue Mountains	4174	961	28%	1.4
Northern NSW	7232	1753	29%	1.4
Northern Sydney	8280	2174	30%	1.4
South Eastern Sydney	8138	1869	28%	1.3
South Western Sydney	9263	1859	24%	1.3
Southern NSW	4458	1076	29%	1.6
St Vincent's Health Network	2099	374	23%	1.2
Sydney	5876	1329	26%	1.2
Sydney Children's Health Network	4109	1070	26%	1.2
Western NSW	7303	1512	24%	1.6
Western Sydney	7245	1377	23%	1.2
NSW	106930	23810	27%	1.4

At the LHD level, the DEFFs range from just over 1.2 to 1.7. This suggests that the sample variance of estimates for some LHDs will be 1.7 times the sample variance that would have been obtained if simple random sampling had been done across the LHD. The LHDs with the largest DEFFs are those that have the greatest range in patient volumes across the facilities within the LHD. The standard errors at the LHD level are fairly small because of the sample sizes at the LHD level. Therefore 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. It was therefore decided not to censor larger weights further than what had already occurred by setting a global maximum weight of 400.

Table 4: Sample size, response rates and design effects (DEFF) by facility, EDPS 2015-16

Facility name	Original Peer Group	Surveys Mailed	Survey Responses	Weighted Response Rate	DEFF
		Facilities reported quarterly			
Bankstown / Lidcombe Hospital	A1	1887	345	22%	1.1
Concord Hospital	A1	1884	490	32%	1.1
Gosford Hospital	A1	1840	450	31%	1.2
John Hunter Hospital	A1	1913	458	29%	1.1
Liverpool Hospital	A1	1928	368	22%	1.1
Nepean Hospital	A1	1944	423	27%	1.1
Prince of Wales Hospital	A1	2077	420	26%	1.2
Royal North Shore Hospital	A1	1900	519	31%	1.1
Royal Prince Alfred Hospital	A1	2028	453	26%	1.1
St George Hospital	A1	1912	431	26%	1.1
St Vincent's Hospital, Darlinghurst	A1	2099	374	23%	1.2
Westmead Hospital	A1	2018	420	26%	1.1
Wollongong Hospital	A1	1883	454	29%	1.1
Sydney Children's Hospital	A2	2054	593	29%	1.0
The Children's Hospital at Westmead	A2	2055	477	23%	1.0
Calvary Mater Newcastle	A3	1866	390	27%	1.2
Sydney/Sydney Eye Hospital	A3	2237	519	29%	1.3
Auburn Hospital	B	2037	366	21%	1.3
Blacktown Hospital	B	1961	374	22%	1.1
Campbelltown Hospital	B	1958	365	23%	1.1
Canterbury Hospital	B	1964	386	22%	1.1
Coffs Harbour Base Hospital	B	1849	399	27%	1.2
Dubbo Base Hospital	B	1870	362	23%	1.3
Fairfield Hospital	B	1961	368	21%	1.2
Hornsby and Ku-Ring-Gai Hospital	B	1866	541	33%	1.1
Lismore Base Hospital	B	1856	444	29%	1.3
Maitland Hospital	B	1987	377	23%	1.2
Manly District Hospital	B	1963	450	28%	1.2
Manning Base Hospital	B	1790	459	32%	1.1
Mona Vale and District Hospital	B	1857	478	30%	1.1
Orange Health Service	B	1893	373	24%	1.1
Port Macquarie Base Hospital	B	1779	482	34%	1.1
Shoalhaven District Memorial Hospital	B	1883	393	27%	1.3
Sutherland Hospital	B	1912	499	31%	1.1
Tamworth Base Hospital	B	1928	400	25%	1.2
The Tweed Hospital	B	1888	489	32%	1.1
Wagga Wagga Base Hospital	B	1911	423	26%	1.1
Wyong Hospital	B	1971	431	29%	1.2

Table 4: Sample size, response rates and design effects (DEFF) by facility, EDPS 2015-16 (cont.)

Facility name	Original Peer Group	Surveys Mailed	Survey Responses	Weighted Response Rate	DEFF
Facilities reported annually					
Armidale and New England Hospital	C1	789	167	24%	1.7
Bathurst Base Hospital	C1	823	184	25%	1.6
Belmont Hospital	C1	691	183	32%	1.5
Bowral and District Hospital	C1	702	191	34%	1.5
Broken Hill Base Hospital	C1	1899	269	20%	1.3
Goulburn Base Hospital	C1	744	172	26%	1.4
Grafton Base Hospital	C1	761	166	27%	1.6
Griffith Base Hospital	C1	758	156	23%	2.0
Hawkesbury District Health Service	C1	760	191	29%	1.5
Mount Druitt Hospital	C1	1229	217	19%	1.2
Murwillumbah District Hospital	C1	759	176	27%	1.7
Ryde Hospital	C1	694	186	29%	1.2
Shellharbour Hospital	C1	733	161	25%	1.3
South East Regional Hospital	C1	699	179	31%	1.5
Ballina District Hospital	C2	649	169	32%	1.5
Bateman's Bay District Hospital	C2	732	170	30%	1.5
Bellinger River District Hospital	C2	554	151	31%	1.8
Blue Mountains District Anzac Memorial Hospital	C2	747	185	28%	1.4
Bulli District Hospital	C2	614	153	27%	1.5
Camden Hospital	C2	827	222	27%	1.5
Casino and District Memorial Hospital	C2	676	139	22%	1.7
Cessnock District Hospital	C2	758	152	22%	1.7
Cooma Health Service	C2	741	187	30%	1.5
Cowra District Hospital	C2	678	142	24%	1.8
Deniliquin Health Service	C2	704	156	26%	1.9
Forbes District Hospital	C2	696	153	24%	1.8
Gunnedah District Hospital	C2	733	131	19%	1.7
Inverell District Hospital	C2	773	145	21%	1.6
Kempsey Hospital	C2	715	151	24%	1.8
Kurri Kurri District Hospital	C2	622	119	23%	1.5
Lithgow Health Service	C2	723	162	27%	1.9
Macksville District Hospital	C2	609	158	31%	1.6
Maclean District Hospital	C2	643	170	32%	1.5
Milton and Ulladulla Hospital	C2	682	190	33%	1.5
Moree District Hospital	C2	746	120	18%	1.8
Moruya District Hospital	C2	695	182	36%	1.5
Mudgee District Hospital	C2	680	158	24%	1.7
Muswellbrook District Hospital	C2	834	163	20%	1.8
Narrabri District Hospital	C2	672	143	22%	1.8
Parkes District Hospital	C2	663	140	23%	1.8
Queanbeyan Health Service	C2	847	186	24%	1.6
Singleton District Hospital	C2	829	165	20%	1.8
Tumut Health Service	C2	677	148	22%	1.9
Young Health Service	C2	761	159	23%	1.9

Demographic characteristics of respondents to EDPS 2015-16

The likelihood of a patient to respond to the survey depends, at least in part, to the socio-demographic identity of the patient. For example, older patients are more likely to respond to the survey as are female patients. Furthermore, patient demographics can affect how patients respond to survey questions and the effect of differing response rates can lead to results that are not representative of the hospital's patient population. To correct for this effect, the survey program 'weights' patient responses so that the results more closely reflect the views of patients at the hospital, LHD or for NSW. The process of weighting is described in the section titled 'Weighting for data'.

Table 5 presents the demographic composition of patients by LHD, age group, visit type, peer group, Aboriginal status and gender, at each stage of the survey. Of the four columns with data:

1) Percentage in initial sampling frame: the percentage of patients in each category in the dataset of eligible patients, following Phase 1 screening
2) Percentage in sample mailed: the percentage of patients in each category provided by the NSW Ministry of Health to Ipsos for mailing, following Phase 2 screening
3) Percentage of respondents (unweighted): the raw/unadjusted percentage of respondents
4) Percentage of respondents (weighted): the weighted percentage of respondents in the final data contributing to reported results.

Table 5: Demographic characteristics of patients and EDPS respondents, 2015-16

Demographic variable	Sub-group	Percentage in patient population	% in MoH* eligible population	Percentage of respondents (Unweighted)	Percentage of respondents (Weighted)
LHD	Central Coast	5	5	4	5
	Far West	1	1	1	1
	Hunter New England	14	13	15	13
	Illawarra Shoalhaven	6	6	6	6
	Mid North Coast	4	4	6	4
	Murrumbidgee	3	3	4	3
	Nepean Blue Mountains	5	5	4	5
	Northern NSW	6	6	7	6
	Northern Sydney	8	9	9	9
	South Eastern Sydney	9	9	8	9
	South Western Sydney	11	11	8	11
	Southern NSW	3	3	5	3
	St Vincent's Health Network	2	2	2	2
	Sydney	6	6	6	6
	Sydney Children's Health Network	.	4	.	.
	Sydney Children's Hospitals Network	4	.	4	4
	Western NSW	5	5	6	5
	Western Sydney	7	7	6	7
Peer group	A1	35	36	24	36
	A2	4	4	4	4
	A3	3	3	4	3
	B	33	34	37	34
	C1	12	12	11	11
	C2	13	12	20	12
Age stratum	Under 18	26	27	28	27
	18-49	38	38	29	38
	50+	36	34	44	35
Stay type	Admitted Emergency	29	25	36	25
	Non-admitted Emergency	71	75	64	75
Aboriginal status	Not Aboriginal	95	n/a	98	98
	Aboriginal and/or Torres Strait Islander	5	n/a	2	2
Gender	Male	51	n/a	49	48
	Female	49	n/a	51	52

**MoH = NSW Ministry of Health; #Sample summaries provided by MoH are summarised only by strata variables. As gender and Aboriginal status were not strata variables, this information was not available at this point in the process.*

Reporting

Confidentiality

BHI does not receive any confidential patient information. The process of mailing of 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.

Only aggregated data are published – unit record data are never published in BHI reports. To further ensure that respondents are not identifiable, BHI only publishes results that include a minimum of 30 respondents.

Statistical Analysis

Data were analysed from July 2015 to June 2016 for annual reporting, and from April 2015 to June 2016 for quarterly reporting. Analyses were undertaken in SAS V9.4 using the SURVEYFREQ procedure. Strata statement variables included: facility, age and visit type.

Results were weighted for all questions except for questions related to socio-demographic characteristics and self-reported health.

For analysis of results at the quarterly level:

- Strata statement variables included: facility (with annually-reported facilities combined within LHD), LHD and age strata
- Results were weighted using weights calculated for the analysis of quarterly data
- Results were generated at the NSW level, and by LHD, peer group and facility (facility-level results only reported for facilities sampled on the basis of quarterly reporting).

Where questions were comparable between years, quarterly results from the 2015-16 survey were appended to quarterly 2013-14 results. For these quarterly results, only performance-type questions are reported in *Healthcare Observer* (www.bhi.nsw.gov.au/healthcare_observer).

In Snapshot: Emergency Department Patient Report, 2015-16, statistically significant trends in the most positive category of the questions were identified using simple linear regression. A model was fitted across the eight quarters of results, weighted by the inverse of the width of the confidence interval for each point estimate. Statistically significant trends (where the p-value of the regression coefficient was less than 0.05) were only reported for questions where an LHD had a least 6 quarters of results and a coefficient of determination (R^2) of at least 0.6.

For analysis of results at the annual level:

- Strata statement variables included: facility and age strata
- Results were weighted using weights calculated for the analysis of annual data
- Results were generated for each question in the survey
- Results were generated at the:

- NSW level, and by LHD, peer group and facility
- NSW level, and by LHD, peer group and facility by triage category (Triage Categories 2,3 and Triage Categories 4,5)
- NSW level, and by LHD, peer group and facility, by demographic characteristics outlined in Table 6
- NSW level by triage category, by demographic characteristics outlined in Table 6.

Table 6: Demographic characteristics of EDPS respondents for reporting, 2015-16

Characteristic	Comment
Age group	0-17, 18-49, 50+ based on self-reported year of birth. Where question on year of birth was missing or invalid, administrative data were used
Gender	Male, Female. Where response were missing or invalid, administrative data were used
Education	
Main language spoken at home	Dichotomised to English, Language other than English
Rurality of hospital (NSW only)	Based on Remoteness category of postcode of location of facility
Long-standing health conditions	Dichotomised to long-standing health condition is reported and none reported for the demographic breakdown
Aboriginal status	Self-reported, dichotomised into Aboriginal or non-Aboriginal. Missing values were excluded rather than imputed from administrative source
Self-reported health status	The SF-1. Excellent, Very good, Good, Fair, Poor
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 patient residence
Country of birth	Australian born vs other, derived from administrative data

Unless otherwise specified, missing responses and those who responded ‘Don’t know/can’t remember’ to questions were excluded from analysis. Typically, performance-style questions exclude missing values and ‘Don’t know/can’t remember’-type responses. 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. For a detailed breakdown of the amount of missing or ‘Don’t know’ responses by question, refer to Appendix 2.

Confidence intervals can be displayed in Healthcare Observer only for quarterly results. The BHI document, “Guide to Interpreting Differences” provides information in understanding comparison of results (http://www.bhi.nsw.gov.au/nsw_patient_survey_program). However, some differences in results between facilities 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.

Calculation of percentages

The result (percentage) for each response option in the questionnaire is determined using the following method:

Numerator

The (weighted) number of survey respondents who selected a specific response option to a certain question, minus exclusions.

Denominator

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

Calculation

= numerator/denominator X100

The results are weighted for most questions. They are not weighted for questions relating to demographics or self-reported health status.

In some cases, the results from several responses are combined to form a 'derived measure', as indicated in the reporting. For information about how these measures are developed, please see Appendix 3.

Appendix 1

Facilities included in the EDPS sampling frame

Appendix Table 1: Eligible patients, sampled patients and proportion sampled by facility, EDPS 2015-16

Facility name	Peer Group	Total eligible patients	Total sampled	Proportion sampled
Bankstown / Lidcombe Hospital	A1	48904	1887	3.9
Concord Hospital	A1	34468	1884	5.5
Gosford Hospital	A1	60156	1840	3.1
John Hunter Hospital	A1	69088	1913	2.8
Liverpool Hospital	A1	76621	1928	2.5
Nepean Hospital	A1	61017	1944	3.2
Prince of Wales Hospital	A1	50422	2077	4.1
Royal North Shore Hospital	A1	77447	1900	2.5
Royal Prince Alfred Hospital	A1	63929	2028	3.2
St George Hospital	A1	71407	1912	2.7
St Vincent's Hospital, Darlinghurst	A1	38785	2099	5.4
Westmead Hospital	A1	66527	2018	3.0
Wollongong Hospital	A1	56740	1883	3.3
Sydney Children's Hospital	A2	34107	2054	6.0
The Children's Hospital at Westmead	A2	53154	2055	3.9
Calvary Mater Newcastle	A3	28204	1866	6.6
Sydney/Sydney Eye Hospital	A3	30764	2237	7.3
Auburn Hospital	B	22857	2037	8.9
Blacktown Hospital	B	38156	1961	5.1
Campbelltown Hospital	B	60772	1958	3.2
Canterbury Hospital	B	38359	1964	5.1
Coffs Harbour Base Hospital	B	32458	1849	5.7
Dubbo Base Hospital	B	25288	1870	7.4
Fairfield Hospital	B	31843	1961	6.2
Hornsby and Ku-Ring-Gai Hospital	B	36034	1866	5.2
Lismore Base Hospital	B	26596	1856	7.0
Maitland Hospital	B	41042	1987	4.8
Manly District Hospital	B	21846	1963	9.0
Manning Base Hospital	B	24192	1790	7.4
Mona Vale and District Hospital	B	32224	1857	5.8
Orange Health Service	B	24920	1893	7.6
Port Macquarie Base Hospital	B	27506	1779	6.5
Shoalhaven District Memorial Hospital	B	33157	1883	5.7
Sutherland Hospital	B	48407	1912	3.9
Tamworth Base Hospital	B	35658	1928	5.4
The Tweed Hospital	B	43560	1888	4.3
Wagga Wagga Base Hospital	B	33042	1911	5.8
Wyong Hospital	B	56811	1971	3.5
Armidale and New England Hospital	C1	13407	789	5.9
Bathurst Base Hospital	C1	21512	823	3.8

Facility name	Peer Group	Total eligible patients	Total sampled	Proportion sampled
Belmont Hospital	C1	21577	691	3.2
Bowral and District Hospital	C1	16619	702	4.2
Broken Hill Base Hospital	C1	14724	1899	12.9
Goulburn Base Hospital	C1	13788	744	5.4
Grafton Base Hospital	C1	18485	761	4.1
Griffith Base Hospital	C1	16015	758	4.7
Hawkesbury District Health Service	C1	21278	760	3.6
Mount Druitt Hospital	C1	30176	1229	4.1
Murwillumbah District Hospital	C1	12887	759	5.9
Ryde Hospital	C1	25037	694	2.8
Shellharbour Hospital	C1	25541	733	2.9
South East Regional Hospital	C1	11663	699	6.0
Ballina District Hospital	C2	13241	649	4.9
Bateman's Bay District Hospital	C2	10839	732	6.8
Bellinger River District Hospital	C2	3552	554	15.6
Blue Mountains District Anzac Memorial Hospital	C2	13751	747	5.4
Bulli District Hospital	C2	4481	614	13.7
Camden Hospital	C2	11465	827	7.2
Casino and District Memorial Hospital	C2	9816	676	6.9
Cessnock District Hospital	C2	13329	758	5.7
Cooma Health Service	C2	7320	741	10.1
Cowra District Hospital	C2	4707	678	14.4
Deniliquin Health Service	C2	6212	704	11.3
Forbes District Hospital	C2	5639	696	12.3
Gunnedah District Hospital	C2	5644	733	13.0
Inverell District Hospital	C2	5931	773	13.0
Kempsey Hospital	C2	17827	715	4.0
Kurri Kurri District Hospital	C2	3782	622	16.4
Lithgow Health Service	C2	9500	723	7.6
Macksville District Hospital	C2	9348	609	6.5
Maclean District Hospital	C2	8211	643	7.8
Milton and Ulladulla Hospital	C2	12325	682	5.5
Moree District Hospital	C2	5810	746	12.8
Moruya District Hospital	C2	8141	695	8.5
Mudgee District Hospital	C2	9610	680	7.1
Muswellbrook District Hospital	C2	7256	834	11.5
Narrabri District Hospital	C2	4240	672	15.8
Parkes District Hospital	C2	7250	663	9.1
Queanbeyan Health Service	C2	16045	847	5.3
Singleton District Hospital	C2	9771	829	8.5
Tumut Health Service	C2	3285	677	20.6
Young Health Service	C2	6581	761	11.6

Appendix 2

Missing and ‘Don’t know’ responses

These data are sourced from Emergency Department Patient Survey, April 2015 to March 2016. Data are unweighted.

Question number	Question text	Missing %	Don't know %	Missing + Don't know %
1	What was your main form of transport to the ED?	1.6		1.6
2	Was there a problem in finding a parking place near to the ED?	0.9		0.9
3	Was the signposting directing you to the ED of the hospital easy to follow?	1.1		1.1
4	Overall, did the ambulance crew treat you with respect and dignity?	2.3	2.2	4.5
5	How would you rate how the ambulance crew and ED staff worked together?	2.5	3.5	6.0
6	Did the ambulance crew transfer information about your condition to the ED staff?	2.3	10.1	12.5
7	Overall, how would you rate the care you received from the ambulance service?	2.3	2.1	4.3
8	Were the reception staff you met on your arrival to the ED polite and courteous?	0.9	2.1	2.9
9	Did reception staff give you enough information about what to expect during your visit?	0.8	5.7	6.4
10	Did reception staff tell you how long you would have to wait for treatment?	2.2	8.9	11.2
11	Was the waiting time given to you by reception staff about right?	3.1	3.4	6.5
12	Did you experience any of the following issues when in the waiting area? [with seating, noise, temperature or odour in the waiting area]	8.1		8.1
13	From the time you first arrived at the Emergency Department (ED), how long did you wait before being triaged by a nurse - that is, before an initial assessment of your condition was made?	2.3	4.9	7.2
14	Did you stay until you received treatment?	2.4		2.4
15	Why did you leave the ED before receiving treatment?	3.7	1.6	5.3
16	After triage (initial assessment), how long did you wait before being treated by an ED doctor or nurse?	5.3	5.6	10.9
17	While you were waiting to be treated, did ED staff check on your condition?	1.1	7.1	8.3
18	While you were waiting to be treated, did your symptoms or condition get worse?	1.0	5.0	6.1
19	Did the ED doctors know your medical history, which had already been given to the triage nurse or ambulance crew?	3.4	10.7	14.1
20	Did you have confidence and trust in the ED doctors treating you?	0.8		0.8
21	Were the ED doctors polite and courteous?	0.9		0.9
22	Overall, how would you rate the ED doctors who treated you?	1.0		1.0
23	Did the ED nurses know your medical history, which had already been given to the triage nurse or ambulance crew?	3.7	11.0	14.7
24	Did you have confidence and trust in the ED nurses treating you?	0.6		0.6
25	Were the ED nurses polite and courteous?	0.6		0.6
26	Overall, how would you rate the ED nurses who treated you?	0.7		0.7
27	Did the ED health professionals introduce themselves to you?	3.3		3.3
28	Did the ED health professionals explain things in a way you could understand?	3.4		3.4
29	During your visit to the ED, how much information about your condition or treatment was given to you?	3.5		3.5
30	Were you involved, as much as you wanted to be, in decisions about your care and treatment?	3.6		3.6
31	If your family members or someone else close to you wanted to talk to the ED staff, did they get the opportunity to do so?	3.6	3.6	7.1
32	How much information about your condition or treatment was given to your family, carer or someone else close to you?	4.1	5.0	9.1
33	Were you able to get assistance or advice from ED staff for your personal needs (e.g. for eating, drinking, going to the toilet, contacting family)?	3.7		3.7
34	How would you rate how the ED health professionals worked together?	3.6		3.6

Question number	Question text	Missing %	Don't know %	Missing + Don't know %
35	Did you ever receive contradictory information about your condition or treatment from ED health professionals?	4.9		4.9
36	Were the ED health professionals kind and caring towards you?	3.9		3.9
37	Did you feel you were treated with respect and dignity while you were in the ED?	3.9		3.9
38	Were you given enough privacy during your visit to the ED?	4.0		4.0
39	Were your cultural or religious beliefs respected by the ED staff?	4.7		4.7
40	Did you have worries or fears about your condition or treatment while in the ED?	4.2		4.2
41	Did an ED health professional discuss your worries or fears with you?	3.0		3.0
42	Were you ever in pain while in the Emergency Department (ED)?	3.9		3.9
43	Do you think the ED health professionals did everything they could to help manage your pain?	2.4		2.4
44	Did you see ED health professionals wash their hands, or use hand gel to clean their hands, before touching you?	3.6	20.2	23.8
45	How clean were the waiting and treatment areas in the ED?	3.9		3.9
46	How safe did you feel during your visit to the ED?	3.6		3.6
47	Were there things for your child to do (such as books, games and toys)?	13.0	5.0	18.0
48	Was the area in which your child was treated suitable for someone of their age group?	12.3		12.3
49	Did the ED staff provide care and understanding appropriate to the needs of your child?	12.2		12.2
50	During your visit to the ED, did you have any tests, X-rays or scans?	4.9	3.5	8.4
51	Did an ED health professional discuss the purpose of these tests, X-rays or scans with you?	1.3	2.3	3.6
52	Did an ED health professional explain the test, X-ray or scan results in a way that you could understand?	1.7		1.7
53	What happened at the end of your visit to the Emergency Department (ED)?	3.9		3.9
54	Did you feel involved in decisions about your discharge from hospital?	2.1		2.1
55	Thinking about when you left the ED, were you given enough information about how to manage your care at home?	1.6		1.6
56	Did ED staff take your family and home situation into account when planning your discharge?	2.0	3.5	5.5
57	Thinking about when you left the ED, were adequate arrangements made by the hospital for any services you needed?	2.0		2.0
58	Did ED staff tell you who to contact if you were worried about your condition or treatment after you left hospital?	2.2	10.8	13.0
59	Thinking about your illness or treatment, did an ED health professional tell you about what signs or symptoms to watch out for after you went home?	2.6		2.6
60	Were you given or prescribed any new medication to take at home?	2.0		2.0
61	Did an ED health professional explain the purpose of this medication in a way you could understand?	1.6		1.6
62	Did an ED health professional tell you about medication side effects to watch for?	2.1		2.1
63	Did you feel involved in the decision to use this medication in your ongoing treatment?	1.9		1.9
64	Did an ED health professional tell you when you could resume your usual activities, such as when you could go back to work or drive a car?	3.1		3.1
65	Did you receive a copy of a letter from the ED doctors to your family doctor (GP)?	2.2	14.8	17.0
66	Was your departure from the ED delayed - that is, before leaving the ED to go to a ward, another hospital, home, or elsewhere?	4.6		4.6
67	Did a member of staff explain the reason for the delay? [in discharge]	3.6		3.6
68	What were the main reasons for delay? [in discharge]	3.8	4.5	8.3
69	Overall, how would you rate the care you received while in the ED?	1.7		1.7
70	If asked about your experience in the ED by friends and family how would you respond?	1.9		1.9
71	Did the care and treatment received in the ED help you?	1.8		1.8
72	In total, how long did you spend in the ED? (from when entered until left to go to a ward/another hospital/home/elsewhere)	2.1	6.9	9.0
73	Did you want to make a complaint about something that happened in the ED?	2.1		2.1
74	Why didn't you make a complaint?	1.7		1.7

Question number	Question text	Missing %	Don't know %	Missing + Don't know %
75	While in the Emergency Department (ED), did you receive or see any information about how to comment or complain about your care?	4.0	36.2	40.3
76	Were you ever treated unfairly for any of the reasons below?	5.3		5.3
77	Not including the reason you came to the ED, during your visit, or soon afterwards, did you experience any of the following complications or problems?	3.4		3.4
78	Was the impact of this complication or problem …?	3.4		3.4
79	In your opinion, were members of the hospital staff open with you about this complication or problem?	4.2		4.2
80	What year were you born?	2.4		2.4
81	What is your gender?	1.2		1.2
82	Highest level of education completed	3.7		3.7
83	Which, if any, of the following long-standing conditions do you have (including age related conditions)?	3.1		3.1
84	In general, how would you rate your health?	1.6		1.6
85	Language mainly spoken at home	1.9		1.9
86	Was an interpreter provided when you needed one in the ED?	1.5		1.5
87	Aboriginal and/or Torres Strait Islander	2.9		2.9
88	What were your reasons for going to the ED?	2.1		2.1
89	Was your visit to the ED for a condition that, at the time, you thought could have been treated by a General Practitioner (GP)?	2.2		2.2
90	In the month before visiting the ED, did you …?	2.6	8.3	10.9
91	Before your visit to the ED, had you previously been to an ED about the same condition or something related to it?	2.3		2.3
92	Who completed this survey?	1.6		1.6
93	Do you give permission for the Bureau of Health Information to link your answers from this survey to health records related to you (the patient)?	5.8		5.8

* 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 3

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 - http://www.bhi.nsw.gov.au/nsw_patient_survey_program).

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 (defined earlier in this technical supplement).

Results are weighted as described in this report.

Inclusions

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

Derived Measure	Original Question	Derived Measure Categories	Original Question Responses
Needed parking near the ED	Q2. Was there a problem in finding a parking place near to the ED?	Needed parking	Yes, a big problem
			Yes, a small problem
			No problem
		Didn't need parking	I did not need to park
Spent time in the waiting area	Q12. Did you experience any of the following issues when in the waiting area? [with seating, noise, temperature or odour in the waiting area]	Spent time in waiting area	I couldn't find somewhere to sit
			The seats were uncomfortable
			It was too noisy
			It was too hot
			It was too cold
			There were bad or unpleasant smells
			No, I did not experience these issues
		Wasn't in waiting area	I did not spend time in the waiting area
Triaged by a nurse	Q13. From the time you first arrived at the Emergency Department (ED), how long did you wait before being triaged by a nurse - that is, before an initial assessment of your condition was made?	Saw a triage nurse	I was triaged immediately
			1-15 minutes
			16-30 minutes
			31-59 minutes
			1 hour to under 2 hours
			2 hours or more
		Didn't see a triage nurse	I did not see a triage nurse
Received treatment from a doctor	Q19. Did the ED doctors know your medical history, which had already been given to the triage nurse or ambulance crew?	Saw a doctor	Yes, definitely
			Yes, to some extent
			No
		Didn't see a doctor	I wasn't treated by a doctor
Received treatment from a nurse	Q23. Did the ED nurses know your medical history, which had already been given to the triage nurse or ambulance crew?	Saw a nurse	Yes, definitely
			Yes, to some extent
			No
		Didn't see a nurse	I wasn't treated by a nurse
Needed information about condition or treatment	Q29. During your visit to the ED, how much information about your condition or treatment was given to you?	Needed information	Not enough
			The right amount
			Too much
		Didn't need information	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 to be involved
			I did not want or need to be involved
	Q31. If your family members or someone else close to	Wanted to talk to staff	Yes, definitely
			Yes, to some extent

Derived Measure	Original Question	Derived Measure Categories	Original Question Responses
Had family/someone close who wanted to talk to staff	you wanted to talk to the ED staff, did they get the opportunity to do so?		No, they did not get the opportunity
		Not applicable	Not applicable to my situation
Had family/someone close who wanted information about condition or treatment	Q32. How much information about your condition or treatment was given to your family, carer or someone else close to you?	Wanted information	Not enough
			Right amount
			Too much
		Not applicable	It was not necessary to provide information to any family or friends
Needed assistance or advice from ED staff for personal needs	Q33. Were you able to get assistance or advice from ED staff for your personal needs (e.g. for eating, drinking, going to the toilet, contacting family)?	Needed assistance	Yes, always
			Yes, sometimes
			No
		Didn't need assistance	I did not need assistance or advice
Had religious or cultural beliefs to consider	Q39. Were your cultural or religious beliefs respected by the ED staff?	Had beliefs to consider	Yes, always
			Yes, sometimes
			No, my beliefs were not respected
		Beliefs not an issue	My beliefs were not an issue
Needed things for child to do (such as books, games and toys)	Q47. Were there things for your child to do (such as books, games and toys)?	Child needed things to do	There were plenty of things for my child to do
			There were some things, but not enough
			There was nothing for my child's age group
			There was nothing for children to do
		Not applicable	Not applicable to my child's visit
Received results of test, X-ray or scan results while in ED	Q52. Did an ED health professional explain the test, X-ray or scan results in a way that you could understand?	Told results	Yes, completely
			Yes, to some extent
			No
		Not told results in ED	I was not told the results while in ED
Wanted or needed to be involved in decisions about discharge	Q54. Did you feel involved in decisions about your discharge from 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 how to manage care at home	Q55. Thinking about when you left the ED, were you given enough information about how to manage your care at home?	Needed information	Yes, completely
			Yes, to some extent
			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	Q56. Did ED 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

Derived Measure	Original Question	Derived Measure Categories	Original Question Responses
Needed services after discharge	Q57. Thinking about when you left the ED, 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
		Didn't need services	It was not necessary
Wanted or needed to be involved in decisions about medication	Q63. Did you feel involved in the decision to use this medication in your ongoing treatment?	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
Experienced complication or problem during or shortly after ED visit	Q77. Experienced complication or problem during or shortly after ED visit (derived measure)	Had complication	An infection
			Uncontrolled bleeding
			A negative reaction to medication
			Complications as a result of tests or procedures
			A blood clot
			A fall
			Any other complication or problem
		None reported	None of these
			Missing
Complication or problem occurred during ED visit	Q79. In your opinion, were members of the hospital staff open with you about this complication or problem?	Occurred in ED	Yes, completely
			Yes, to some extent
			No
		Occurred after left	Not applicable, as it happened after I left
Needed an interpreter	Q86. Was an interpreter provided when you needed one in the ED?	Needed an interpreter	Yes, always
			Yes, sometimes
			No, I needed an interpreter but one was not provided
		Didn't need interpreter	No, I did not need an interpreter

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.