

The Insight Series

Patients' experiences of elective surgery care

Technical Supplement

October 2023

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State Health Publication Number: (BHI) 230700-1

Suggested citation:

Bureau of Health Information. *Technical Supplement – Patient's experiences of elective surgery care*. Sydney (NSW): BHI; 2023.

Please note there is the potential for minor revisions of data in this report.

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Published October 2023

The conclusions in this report are those of BHI and no official endorsement by the NSW Minister for Health, the NSW Ministry of Health or any other NSW public health organisation is intended or should be inferred.

Introduction

This document is a supplement to the Bureau of Health Information (BHI) report, *The Insights Series – Patients' experiences of elective surgery care*. It describes the data sources and analytic methods used in the report. To produce this report, BHI independently calculated measures using the following data source: Adult Admitted Patient Survey (AAPS) 2022.

The AAPS 2022 questionnaire comprised 74 questions, including questions for patients who underwent elective surgery (elective surgery module) during their admission. The 13-question module was added to gain insights into patients' experiences of elective surgery care.

The [AAPS 2022 Technical Supplement](#) outlines the sampling methodology, data management and analysis for the Adult Admitted Patient Survey 2022.

Elective Surgery cohort definition and response rate

An elective surgery is defined as any procedure that is placed on the NSW Health's Waiting List Collection On-line System (WLCOS) that is later performed during a planned admitted episode. This procedure must be considered an elective surgery for key performance indicator purposes as defined by NSW Health.

Eligible admitted patients aged 18 years and above whose hospital records showed that they underwent an elective surgery between August to October 2022 were randomly selected and invited to provide feedback of their hospital stay. A total of 3,662 questionnaires with the elective surgery module were sent to these patients and the response rate was 32%. Among these, 88% patients (n = 1,157) self-reported as having had a planned surgery or procedure during their hospital stay and were included in the analysis.

Determining key drivers of overall patient experience

To assess the association between key aspects of patient experience of elective surgery care, including deterioration of symptoms while waiting for the surgery (Q60) and return to hospital (Q50 and Q51), separate univariate and multivariable logistic regression models were developed. The models incorporated responses to the remaining elective surgery module questions and key patient characteristics.

Responses to the outcome questions were dichotomised as follows:

- Model 1 (Q60 - While you were waiting for your planned surgery or procedure, did your symptoms or condition...?): 'Get much better', 'Get a little better', 'Stay about the same' coded as '0', and 'Get a little worse' and 'Get much worse' coded as '1'.
- Model 2 (In the month [Q50] / three months [Q51] following your discharge, were you re-admitted to any hospital, or did you go to an emergency department because of complications related to the care you received?): 'Yes' for either question coded as '1', and 'No' coded as '0'.

For the questions related to waiting times (Q56 and Q57), the responses '91 to 365 days' and 'I waited longer than 1 year' were combined. Responses to the remaining questions were dichotomised into binary predictors with the most positive response option coded as '1' and all other response options coded as '0'. Missing or 'Don't know/Can't remember', and 'Not applicable' responses were excluded if the percentage was less than 10, otherwise were included as a separate category in the models.

The following patient characteristics were considered as independent variables in each model: age group (18–54 years, 55–74 years, 75+ years), gender (Woman or female, Male or male), education level (less than Year 12 or equivalent, completed Year 12 or equivalent, trade or technical certificate or diploma, university degree, post-graduate/higher degree), language spoken at home (English language, others), rurality of patient residence (urban, rural), Aboriginality, and having a longstanding health condition (yes, no or missing).

Univariate analysis was used to examine the association between each predictor and the outcomes. Demographic questions and questions about care experience significant at 20% level were considered for inclusion in the multivariable models. Only variables with two-sided P values less than 0.05 in the multivariable models were retained in the final models (Table 2 and Table 3). Age and gender were forced in the final models for further adjustment although these patient characteristics were not significant. Adjusted odds ratios and their confidence intervals were used to assess the relative importance of each factor.

Table 1 Elective surgery module questions, AAPS 2022

Question number	Question
Q52	Did you have a planned surgery or procedure during this hospital stay?
Q53	Did the specialist doctor explain the possible risks and benefits of your planned surgery or procedure in a way you could understand?
Q54	When making decisions about your planned surgery or procedure, did a health professional at the hospital inform you about different treatment options?
Q55	Did you feel confident you were making an informed decision to have your planned surgery or procedure?
Q56	Thinking back to when you first tried to book an appointment with a specialist doctor, how long did you have to wait to see that specialist?
Q57	From the time a specialist doctor said you needed the planned surgery or procedure, how long did you have to wait to be admitted to hospital?
Q58	Do you think the amount of time you waited, from the time a specialist doctor said you needed to be admitted to hospital, was...?
Q59	Once your planned surgery or procedure was booked, did the hospital ever delay or reschedule your planned surgery or procedure?
Q60*	While you were waiting for your planned surgery or procedure, did your symptoms or condition...?
Q61	While you were waiting for your planned surgery or procedure, did a health professional (from the hospital, or your general practitioner) monitor your symptoms or condition?
Q62	Did your family, carer or someone close to you receive enough information about your planned surgery or procedure and what to expect?
Q63	Looking back, did the health professionals at the hospital prepare you for what to expect in the weeks and months after your planned surgery or procedure?
Q64	After you left the hospital and went home, were the health professionals you saw in your community (such as your general practitioner) up-to-date about the care you received in the hospital?

*Question was used to define one of the outcomes.

Table 2 Adjusted odds ratio for the likelihood of respondents reporting their symptoms or condition got 'a little worse' (20%) or 'much worse' (9%)

Predictor	Response	Reference	Adjusted odds ratio (95% confidence interval)
Q58: Do you think the amount of time you waited, from the time a specialist doctor said you needed to be admitted to hospital, was...?	Slightly too long/Much too long	About right	4.5 (2.7 - 7.4)
Q61: While you were waiting for your planned surgery or procedure, did a health professional (from the hospital, or your GP) monitor your symptoms or condition?	No, but I would have liked them to check	Yes	3.9 (1.5 - 10.2)
Age	18–54 years	75+ years	0.7 (0.4 - 1.4)
	55 –74 years	75+ years	1.2 (0.7 - 1.9)
Gender	Woman or female	Man or male	1.4 (0.8 - 2.4)
Aboriginality	Aboriginal	Non-Aboriginal	2.3 (1.3 - 4.3)

Table 3 Adjusted odds ratio for the likelihood of respondents reporting they were re-admitted to any hospital or went to an emergency department because of complications related to care received in one/three months following discharge (8%)

Predictor	Response	Reference	Adjusted odds ratio (95% confidence interval)
Q63: Looking back, did the health professionals at the hospital prepare you for what to expect in the weeks and months after your planned surgery or procedure?	No/Yes, to some extent	Yes, definitely	4.4 (2.2 - 8.9)
Age	18–54 years	75+ years	0.7 (0.3 - 1.8)
	55–74 years	75+ years	0.9 (0.4 - 2.1)
Gender	Woman or female	Man or male	1.0 (0.5 - 1.9)