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Surgical Variance Report **General Surgery**

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Introduction to Surgical Variance Report: General Surgery

The Royal Australasian College of Surgeons' (RACS) vision is to champion surgical standards, professionalism and surgical education in Australia and New Zealand. It is committed to advocating for sustainable, safe, affordable and high quality healthcare that represents best practice.

Similarly, Medibank, Australia's leading private health insurer, is focussed on improving the health outcomes of patients, improving patient experiences, and improving efficiencies in the health system.

Currently, there is limited available information to surgeons on indicators such as the median length of patient stay, rates of readmission or admission to an intensive care unit (ICU), and prices charged for services, for different procedures within their speciality, and particularly in the private sector.

However, such information would enable surgeons to gain a better understanding of variations, and consider how their practice could be improved for the benefit of patients.

RACS and Medibank are pleased to publish the inaugural Surgical Variance Report, which analyses a number of clinical and other indicators for common procedures within general surgery.

This is the first in a series of reports which will be published in the coming months, on common procedures within surgical specialities, including general surgery, urology, ear, nose and throat surgery, vascular surgery and orthopaedic surgery.

The data contained in these reports are based on analysis of de-identified Medibank claims data from 2014, which the College has analysed and interpreted. The reports deliberately pose questions that every clinician can reasonably ask about the possible reasons for the variations, and consider individual answers.

RACS and Medibank will continue to work together to identify opportunities to improve and enhance these reports so that they are as meaningful and useful as possible to surgeons, and we welcome everyone's feedback and comments.

The data contained in these reports do not define best practice, however it is hoped that by highlighting variation in practice, we will be able to improve clinical outcomes and patient care.



Professor David Watters OBE
President
Royal Australasian College of Surgeons



Dr Linda Swan
Chief Medical Officer,
Medibank

Foreword

Data collected as part of a healthcare episode contains important insights about ways to improve care, achieve better outcomes and make care more efficient. However, there is a substantial challenge in bringing this information to light. The data is inherently complex and there is a shortage of individuals with the skills to extract intelligence from it.

The collaboration between the Royal Australasian College of Surgeons and Medibank combines the perspective of specialty experts with the skills of a data custodian. The value of this collaboration is well illustrated by the high quality information that has been derived. The dataset is large, comprising approximately 25% of the separations that occurred in private hospitals in 2014 for the procedures considered.

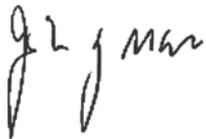
The prime purpose of the analysis is to explore variation in surgical practice and to raise questions that will allow clinicians and others to reflect on aspects of medical practice. It has been demonstrated many times that if information of this type is fed back to clinicians it often leads to greater uniformity of practice. Often the data comes as a revelation to those receiving it.

Studies of variation have become a very important part of healthcare analysis. It is frequently a sign of an evidence gap, but may also point to inefficiency or variation in outcomes. In many cases, it is the flag that initiates further more detailed analyses leading to changed practice.

Some aspects of the present report illustrate limitations typical of all large health datasets. For example, could reported variation infection rates have been influenced by variation in definitions and recording? Are readmission rates influenced by the distinction between planned and unplanned readmissions or whether the readmission was for a complication or an entirely different problem? Similarly, duration of admission is often dependent on comorbidities or social factors. So it is important that data like this is not used to reach simplistic conclusions, but should stimulate more detailed investigation.

Credible data is a powerful motivator of clinician behaviour. When convincing evidence is presented that outcomes could be better or safety improved, it is rarely ignored. One of the biggest problems at present is how little data of this type is routinely available.

For these reasons, this initiative is a welcome advance and a credit to both organisations involved in its production.



Prof. John McNeil, AM, MBBS, MSc, PhD, FRACP, FAFPHM

Professor and Head, Department of Epidemiology & Preventive Medicine, School of Public Health and Preventive Medicine, Faculty of Medicine, Nursing and Health Sciences, Monash University

Data used in this report

The data contained in this report is based on administrative claims data received by Medibank from private hospitals, for treatment of holders of Medibank-branded (but not ahm-branded) policies. The data relates to hospital separations with an admission date falling in 2014 (calendar year) and any follow-up hospital separations funded by Medibank within six months of discharge. The data comprises:

- Hospital claims data submitted to Medibank by private hospitals and used by Medibank to assess and pay benefits relating to hospital treatment on behalf of members. Hospital claims data includes details relating to the use of, amount charged and benefits paid for hospital accommodation, intensive care and prostheses provided in connection with treatment in hospital
- Hospital casemix protocol (HCP) data submitted to Medibank by private hospitals for each privately insured hospital separation, as required by legislation. HCP data includes details relating to diagnoses, interventions, demographics and financial data in connection with policy holders' treatment in hospital
- Medicare Benefit Schedule (MBS) claims data from medical practitioners, including diagnostic providers, submitted to Medibank by Medicare, medical practitioners or members, which is used by Medibank to assess and pay benefits for medical and diagnostic services provided to policy holders in relation to their hospital treatment. MBS claims data includes details relating to the use of MBS item numbers by medical practitioners as well as the amount charged, benefits paid and out of pocket costs incurred by policy holders for each MBS item claimed.

Data relating to individual surgeons and physicians have been identified using the Medicare provider number on the MBS claim, with activity aggregated and summarised across all practice locations relating to that provider number. A principal surgeon has been identified for each hospital separation based on the surgeon claiming the highest value MBS item schedule fee relating to a surgical procedure for that hospital separation.

The indicators included in this report for each procedure have been selected by RACS, having regard to the limitations of Medibank's datasets, and in consultation with the Clinical Variation Working Party, which comprises a panel of specialty experts (see page 53 for membership).

Surgeon-level analysis of the indicators included in this report has been limited to surgeons who performed at least five procedures. This has been done to ensure that each surgeon has a sufficient sample of separations to allow a value (e.g. an average, median or percentage) against an indicator to be reported. State and territory values have only been published where five or more specialists were included in the dataset, to protect the anonymity of surgeons in those areas. Medibank has not shared any information with RACS which would enable RACS to identify surgeons and only de-identified data is contained in this report.

Outliers at a separation-level and surgeon-level have been included in the analysis, although data points for some outlying surgeons are not shown in the figures.

No attempts have been made to risk adjust the data.

Disclaimer

The purpose of this report is to provide information to surgeons that highlights variation in surgical practice and encourages surgeons to reflect on their own practice and potential causes of the variation, with a view to supporting the continuous improvement of clinical outcomes and patient care.

It is important to recognise that:

- while Medibank has taken reasonable steps to ensure the accuracy and validity of the data, the report relies on the accuracy of information prepared and provided by hospitals, medical practitioners and policy holders;
- the data used for the purposes of this report relates to a specific time period (being calendar year 2014 and part of calendar year 2015);
- no adjustment has been made to the data based on casemix, patient risk or any other factor that may be taken into account when considering the data and any variation;
- the report identifies specialists by MBS provider stems, which in some limited cases may result in one individual being identified more than once;
- the report is not intended to, and is not a basis for, an assessment of relative or actual performance of specialists;
- the report does not contain any qualitative commentary or analysis; and
- the report may not reflect results of the wider private hospital sector or the health industry as a whole.

Indicators measured in this report

A selection of the indicators described below have been analysed for each of the eight procedures included in this report.

Indicator	Explanation
Median age of patients	The median age of a surgeon's patients at the time of discharge.
Median length of stay (nights)	The median number of nights that a surgeon's patients stayed in hospital.
Percentage of patients that stayed in hospital overnight	Separations where the patient stayed in hospital overnight, expressed as a percentage of a surgeon's total separations for that procedure.
Percentage of separations with an operative cholangiogram (MBS#30439)	Separations (laparoscopic cholecystectomy only) where an operative cholangiogram (MBS# 30439) was billed, expressed as a percentage of a surgeon's total separations for laparoscopic cholecystectomy.
Percentage of separations where the patient was transferred to ICU	Separations where patients were transferred to an intensive care unit (ICU), expressed as a percentage of a surgeon's total separations for that procedure.
Rate of Hospital Acquired Complications per 1,000 separations	Separations where a Hospital Acquired Complication was identified, expressed as a rate per 1,000 separations of a surgeon's total separations for that procedure. Hospital Acquired Complications are Medibank's subset of 82 International Classification of Diseases (ICD) codes drawn from the Australian Commission of Safety and Quality in Healthcare's high priority complications dataset (see Table 55). They are selected on the basis that they occur frequently in private hospitals (relative to other complications) and are likely to result in increased costs.
Percentage of patients readmitted within 30 days	Separations where patients were readmitted to the same or a different hospital within 30 days of discharge from the original separation, expressed as a percentage of a surgeon's total separations for that procedure. Readmissions for all-causes except for readmissions for rehabilitation, psychiatric treatment, dialysis and chemotherapy, were included. Separations involving a patient 80 years or older were excluded from this analysis.
Percentage of patients re-operated on within six months	Separations where patients were re-operated on for the same procedure (meaning any one of the MBS codes included in the analysis for that procedure) within 6 months of discharge from the original separation, expressed as a percentage of a surgeon's total separations for that procedure.
Average number of MBS items billed	The total number of MBS items billed by a surgeon, expressed as an average number of MBS items billed per separation for a surgeon.
Average prostheses cost	The total of all charges relating to prostheses items (including consumables) for a hospital separation, expressed as an average prostheses cost per separation for a surgeon.
Average separation cost	The total of all charges relating to the hospital separation, expressed as an average cost per separation for a surgeon. Includes all charges raised by the hospital, medical practitioners, diagnostic providers and for prostheses items.
Average surgeon out of pocket charge	The patient out of pocket charge from the principal surgeon. Expressed as an average out of pocket charge per separation for a surgeon.
Average out of pocket charge for other medical services	The patient out of pocket charge for all other medical services (including charges from the anaesthetist, assistant surgeon and for diagnostics). Expressed as an average out of pocket charge for other medical services per separation, for a surgeon.

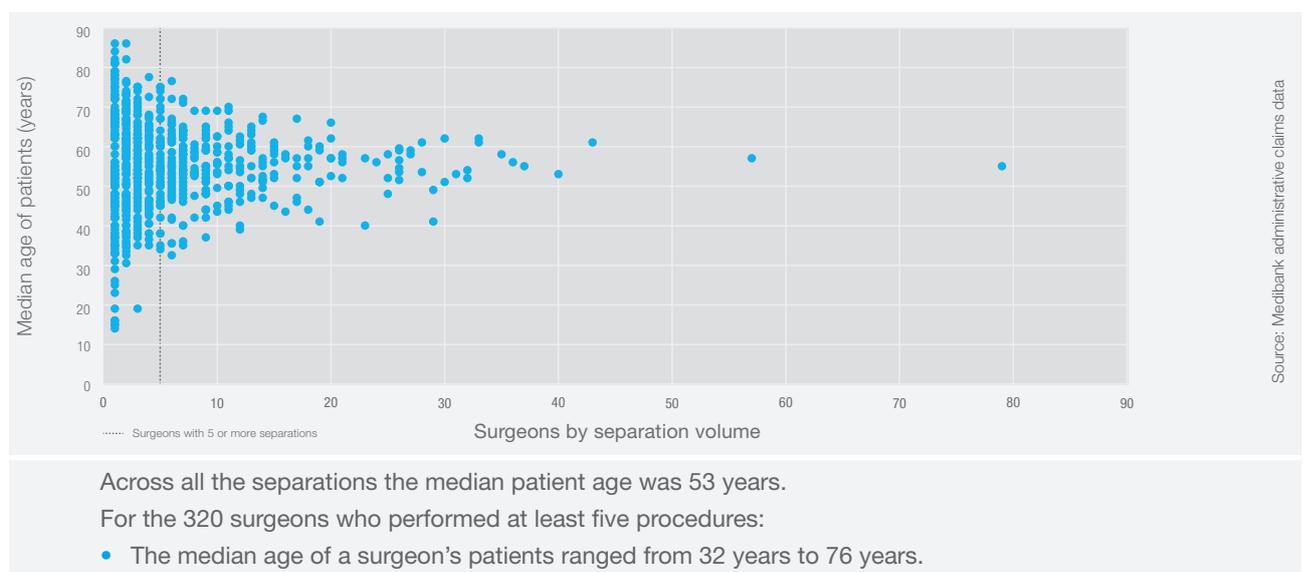
Laparoscopic cholecystectomy procedures

In 2014 Medibank funded 4,666 operations in private hospitals where laparoscopic cholecystectomy was recorded as the principal procedure (highest value MBS fee from the medical claim) for the hospital admission. For 4,494 of these procedures, MBS item number 30445 (see Table 1) was billed as the principal procedure. This analysis is limited to those 4,494 procedures. 682 surgeons (identified through the stem of their Medicare provider number) billed Medibank for those procedures. 320 (47%) of these surgeons billed Medibank for five or more laparoscopic cholecystectomy procedures during 2014. Surgeon-level analysis of the indicators considered for this procedure has been limited to those surgeons with five or more patient separations, so that each surgeon has a sufficient sample of separations from which a value (e.g. an average, median or percentage) for an indicator can be reported.

Table 1: MBS codes

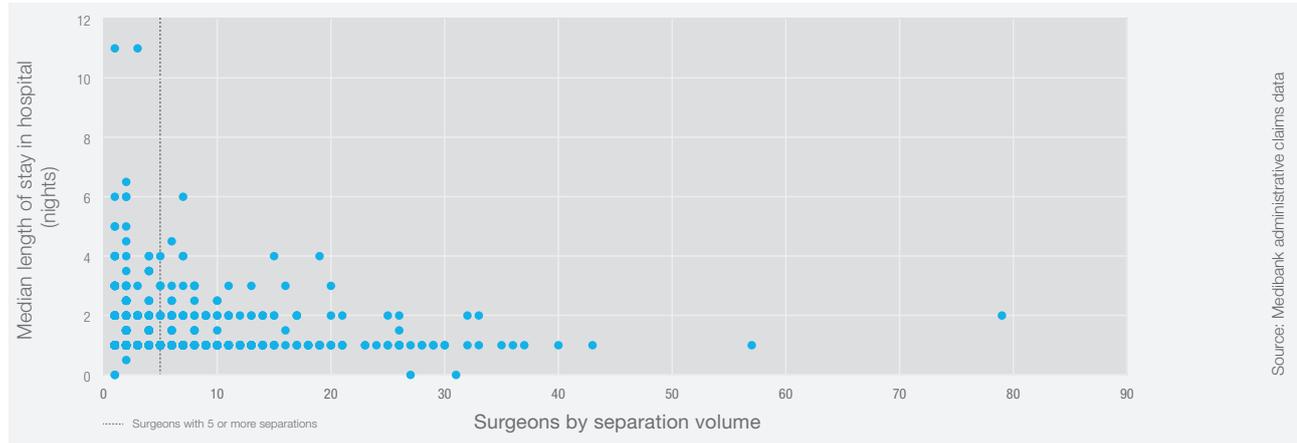
Procedure	MBS Codes	Volume of separations	Percentage of separations	Definition	Notes
Laparoscopic cholecystectomy	30445	4,494	96%	Laparoscopic cholecystectomy	Separations included in following analysis
	30446	49	1%	Laparoscopic cholecystectomy when procedure is completed by laparotomy	Separations not included in following analysis
	30448	123	3%	Laparoscopic cholecystectomy, involving removal of common duct calculi via the cystic duct	Separations not included in following analysis

Figure 1: Median age of patients



Is this variation in age clinically expected?

Figure 2: Median length of stay in hospital (nights)



Source: Medibank administrative claims data

For the 320 surgeons who performed at least five procedures:

- The median number of nights that a surgeon’s patients stayed in hospital ranged between 0 nights (same day admission and discharge) and 6 nights with a median of 1 night.

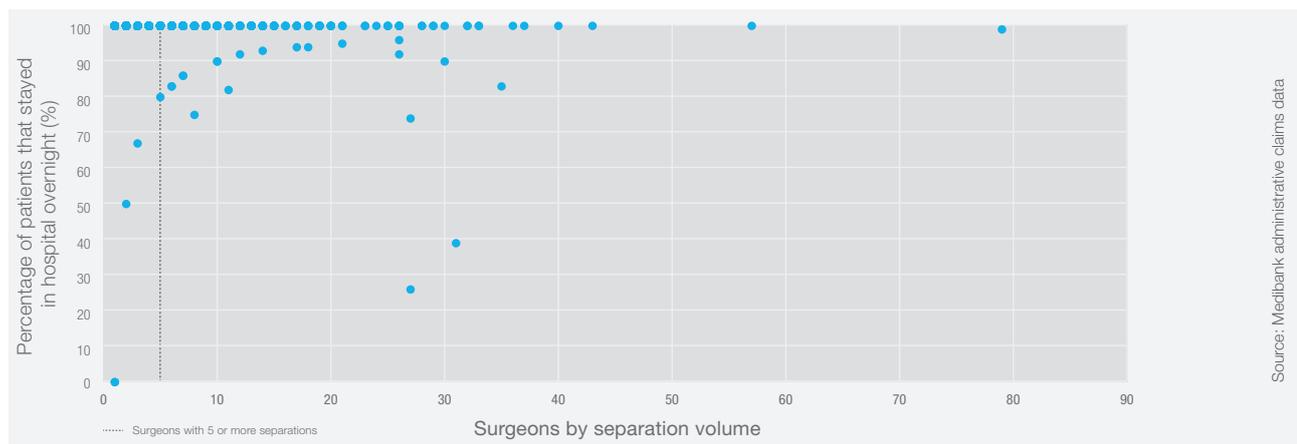
Table 2: Median length of stay (nights) by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Length of stay	NA*	1	NA*	1	NA*	1	1	1

* State/territory values not reported if dataset includes less than five surgeons

What would you consider the most effective length of stay for this procedure?

Figure 3: Percentage of patients that stayed in hospital overnight



Source: Medibank administrative claims data

In 98% of the hospital separations the patient stayed in hospital for at least one night.

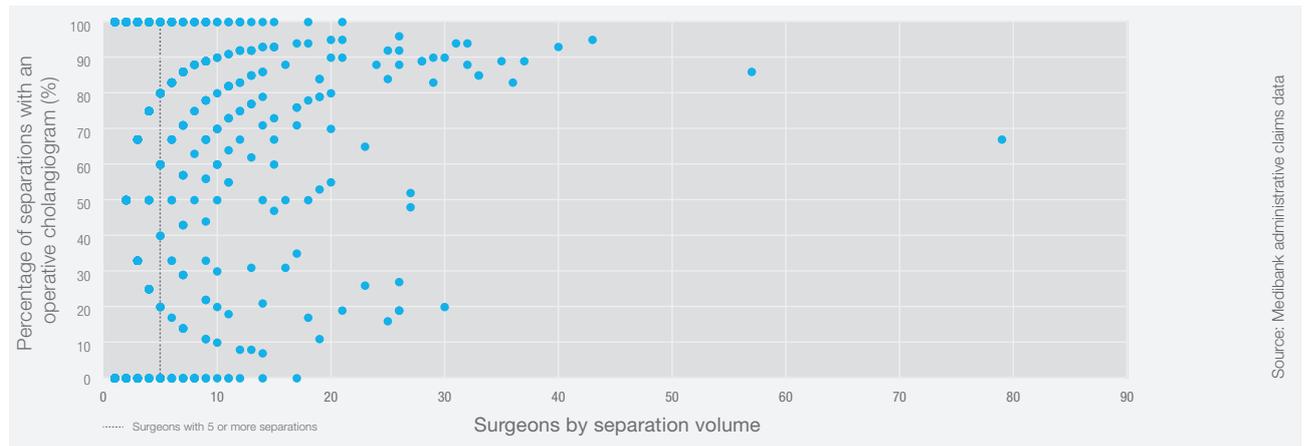
For the 320 surgeons who performed at least five procedures:

- 298 (93%) had all of their patients stay in hospital overnight
- 22 (7%) had a mix of patients that either stayed in hospital overnight or were admitted and discharged on the same day
- The percentage of a surgeon’s patients that stayed in hospital overnight ranged between 26% and 100% with a median of 100%.

What are the reasons for a patient staying in hospital overnight following this procedure?

Why is there variation in the rate of patients that stay in hospital overnight between surgeons?

Figure 4: Percentage of separations with an operative cholangiogram (MBS# 30439)

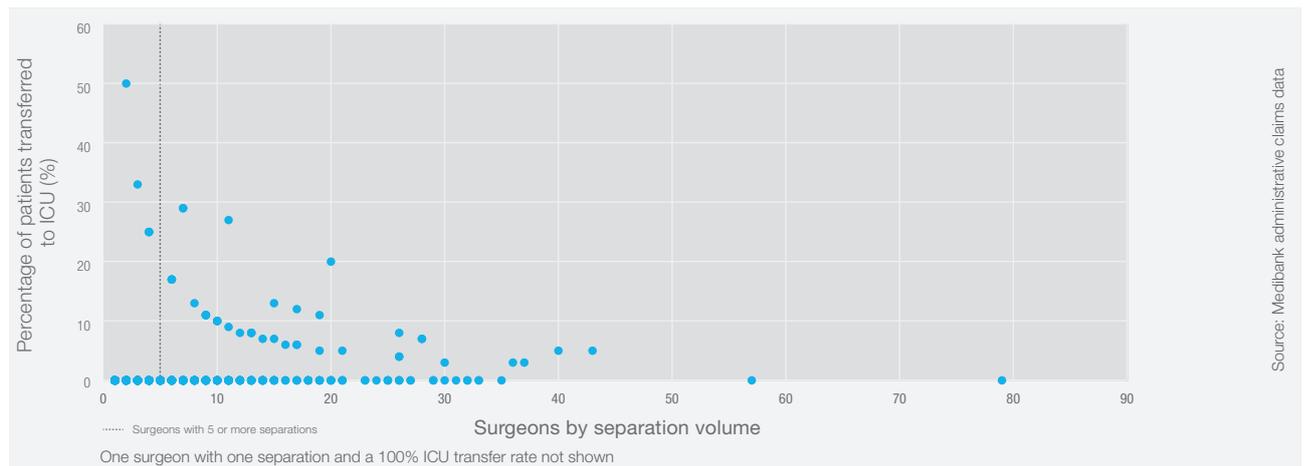


For the 320 surgeons who performed at least five procedures:

- The percentage of a surgeon's patients where an operative cholangiogram was billed ranged between 0% and 100% with a median of 80%
- 31 (10%) did not bill Medibank for an operative cholangiogram for any of their patients
- 237 (74%) billed Medibank for an operative cholangiogram for some of their patients
- 52 (16%) billed Medibank for an operative cholangiogram for all of their patients.

What is the role of an operative cholangiogram with this procedure?

Figure 5: Percentage of patients transferred to ICU



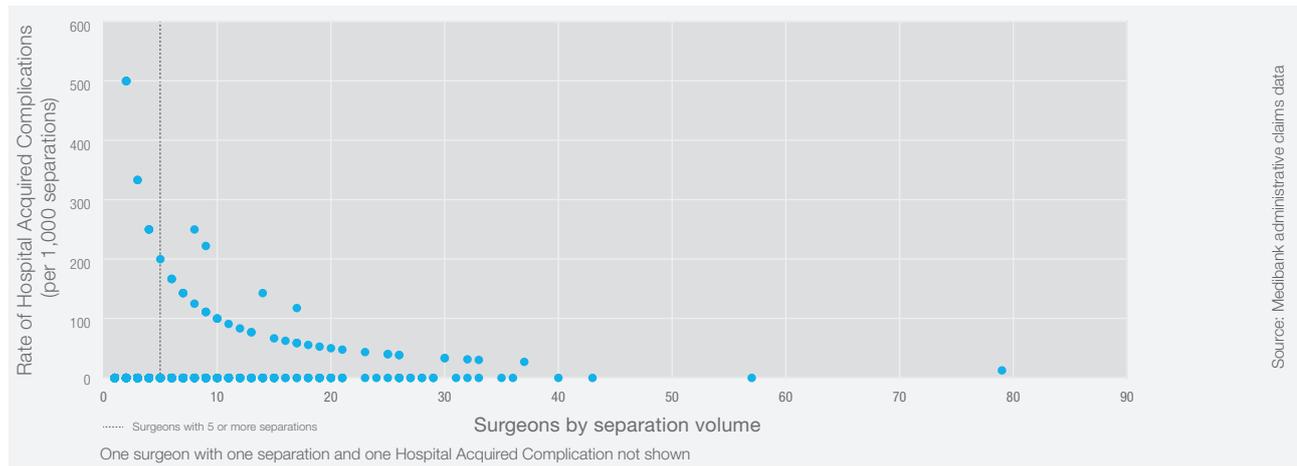
Patients were transferred to an intensive care unit (ICU) in 1% of overall hospital separations. Administrative claims data does not indicate whether the transfers were planned or unplanned.

For the 320 surgeons who performed at least five procedures:

- 40 (13%) surgeons had one or more patient separations during which patients were transferred to ICU
- The percentage of a surgeon's patients that were transferred to ICU ranged between 0% and 29% with a median of 0%.

Given that ICU transfers could indicate a difficult post-operative recovery, what would be the expected transfer rate?

Figure 6: Rate of Hospital Acquired Complications (per 1,000 separations)



Hospital Acquired Complications are a Medibank subset of 82 International Classification of Diseases (ICD) codes drawn from the Australian Commission of Safety and Quality in Health Care’s high priority list of complications (see Table 55).

The rate of Hospital Acquired Complications was 13 per 1,000 hospital separations.

For the 320 surgeons who performed at least five procedures:

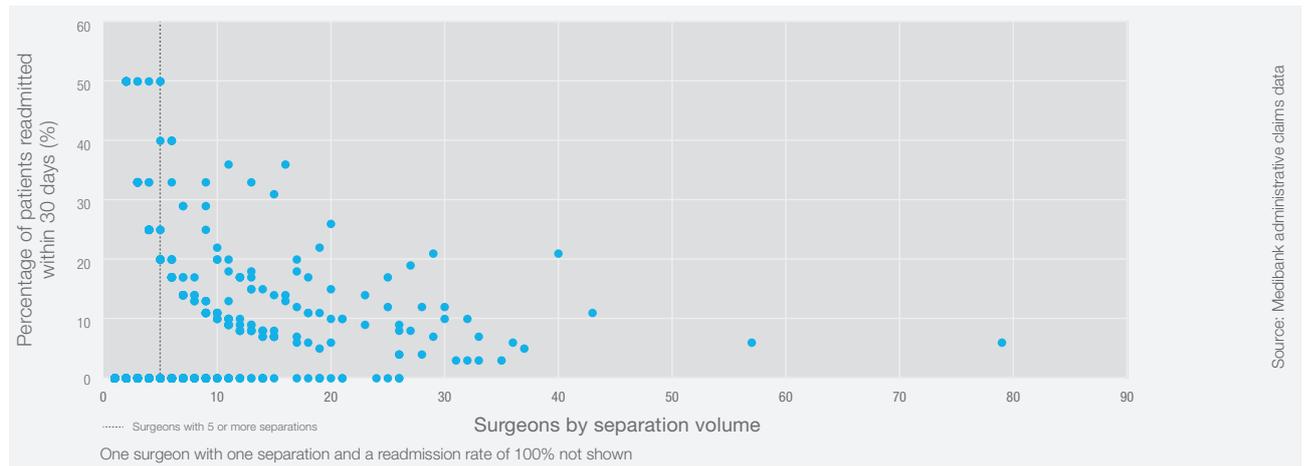
- 42 (13%) surgeons had one or more patient separations during which a Hospital Acquired Complication was identified
- The rate of Hospital Acquired Complications for a surgeon ranged between 0 per 1,000 separations to 250 per 1,000 separations with a median of 0 per 1,000 separations.

Table 3: Hospital Acquired Complications identified during the hospital separation

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	7	50	0	57

What complications have you had for this procedure?

Figure 7: Percentage of patients readmitted within 30 days



Following 331 (7.8%) of separations patients were readmitted (for all causes)* to a hospital within 30 days. Administrative claims data does not indicate whether the readmissions were planned or unplanned. The median age of patients readmitted was 58 years, compared with a median age of 53 years for those patients not readmitted. Of the 331 separations followed by a readmission:

- 262 readmissions were to a private hospital (either the same hospital or a different one). In 26 of these separations a Hospital Acquired Complication was identified (see Table 4)
- 69 readmissions were to a public hospital (where the patient was treated as a private patient).

For the 320 surgeons who performed at least five procedures, the percentage of a surgeon’s patients readmitted within 30 days ranged between 0% and 50% with a median of 5%.

Readmissions to public hospitals, where patients were treated as public patients, are not captured in these datasets.

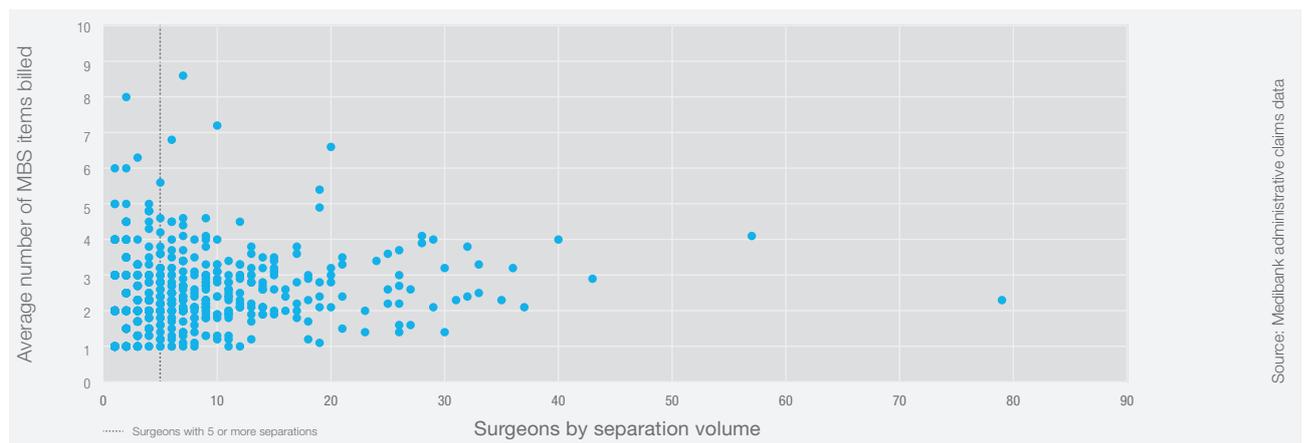
* Readmissions for rehabilitation, psychiatric treatment, dialysis and chemotherapy were excluded where identified. Separations involving a patient 80 years or older were also excluded.

Table 4: Hospital Acquired Complications identified on readmission

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	13	13	0	26

What are the reasons for readmission for this procedure, and what is the expected rate?

Figure 8: Average number of MBS items billed

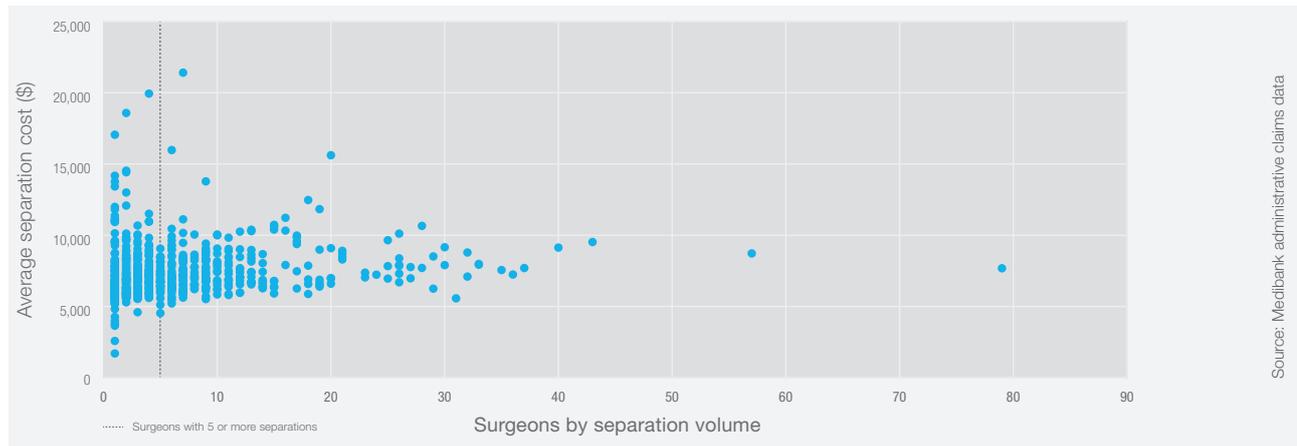


The average number of MBS items billed by the surgeon (the principal surgeon only) was 2.6 per hospital separation.

Of the 320 surgeons who performed five or more procedures, the average number of MBS items billed by a surgeon ranged between a minimum of 1 and a maximum of 8.6 with a median of 2.4.

What are the reasons for the wide variation in the number of MBS items billed?

Figure 9: Average separation cost



The separation cost includes the total charges for the hospital separation, including payments made by Medibank, Medicare and the patient. Costs include hospital, prostheses, medical practitioners and diagnostic services. The average total cost was \$7,707 per hospital separation.

For the 320 surgeons who performed at least five procedures, the average separation cost for a surgeon ranged between \$4,543 and \$21,419 with a median of \$7,235.

Table 5: Average separation cost by region

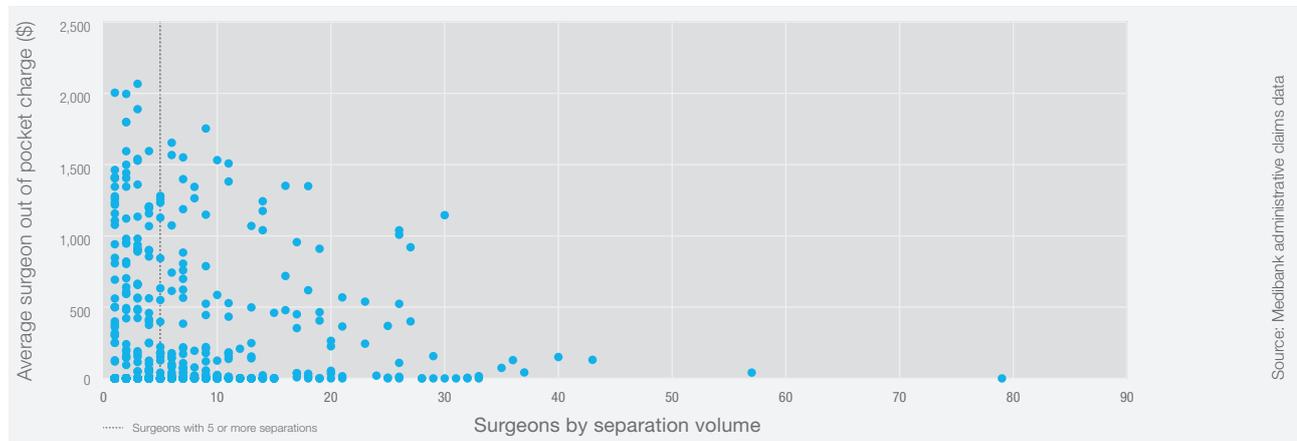
State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Average separation cost	NA*	\$7,193	NA*	\$7,577	NA*	\$7,842	\$8,689	\$7,231

* State/territory values not reported if dataset includes less than five surgeons

Are you aware of the associated costs for this procedure such as pathology, diagnostic imaging, surgical assistants, anaesthetists, hospital bed fees?

What are the reasons for variation in separation costs?

Figure 10: Average surgeon out of pocket charge



Patients were charged an out of pocket fee by the principal surgeon in 25% of hospital separations.

For the 320 surgeons who performed at least five procedures, 167 (52%) did not charge any of their patients an out of pocket for the hospital admission. The average out of pocket charge from a surgeon ranged from \$0 (no out of pocket charge) to a maximum of \$1,754 with a median of \$0.

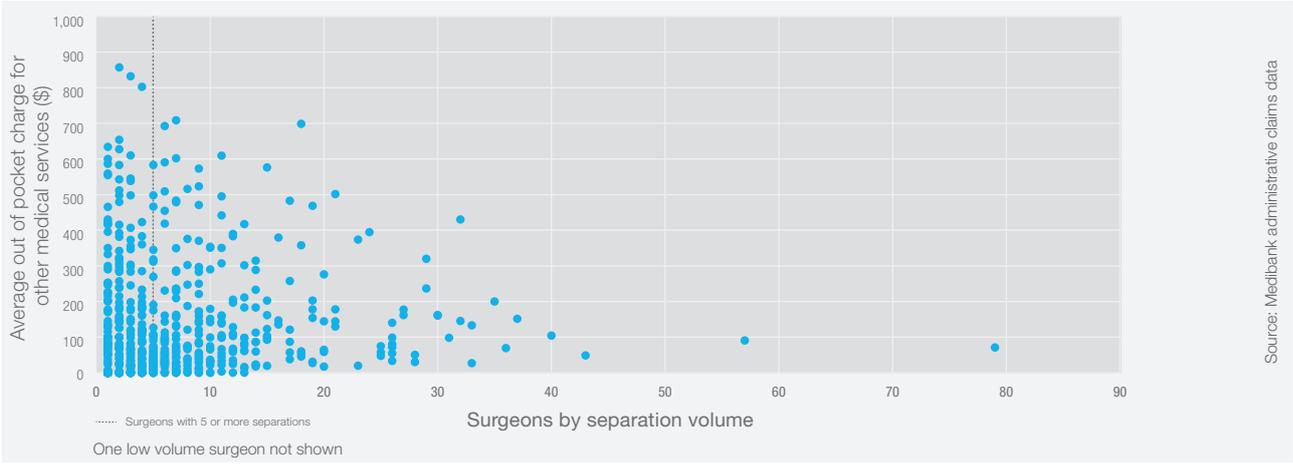
Table 6: Surgeon out of pocket charges by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	NA*	34%	NA*	32%	NA*	14%	14%	21%
Average OOP charged	NA*	\$1,166	NA*	\$762	NA*	\$369	\$387	\$775

* State/territory values not reported if dataset includes less than five surgeons

Why is there such variation in the average out of pocket charge?

Figure 11: Average out of pocket charge for other medical services



Patients were charged an out of pocket fee for other medical services (including charges raised by the anaesthetist, assistant surgeon and for diagnostics) in 91% of the hospital separations. For the 320 surgeons who performed at least five procedures, the average out of pocket charges received by their patients for other medical services ranged between \$0 and \$709 with a median of \$79.

Table 7: Out of pocket charges for other medical services by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	NA*	88%	NA*	95%	NA*	91%	91%	88%
Average OOP	NA*	\$182	NA*	\$148	NA*	\$129	\$92	\$205

* State/territory values not reported if dataset includes less than five surgeons

Why is there such variation in the average out of pocket charge?

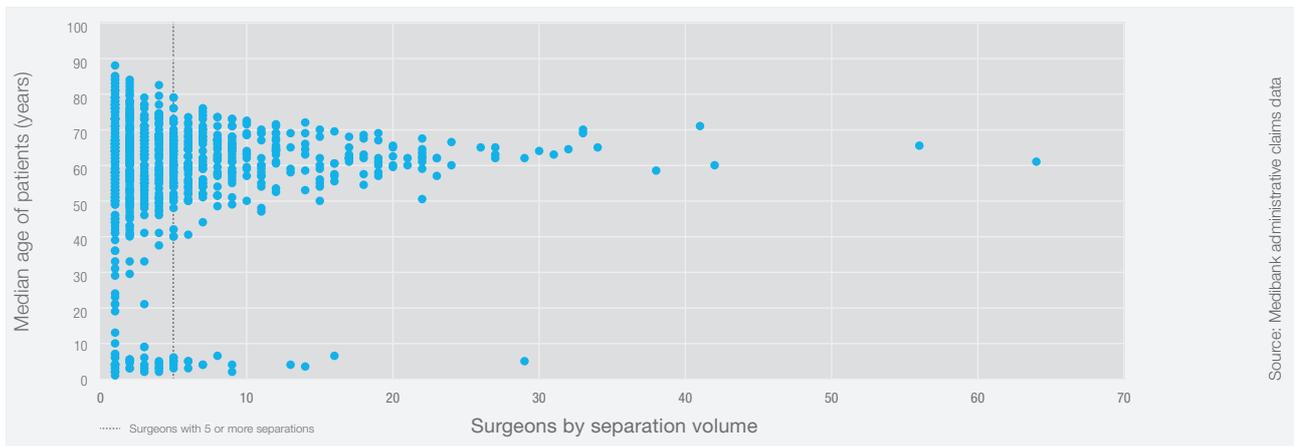
Hernia procedures

In 2014 Medibank funded 4,605 operations in private hospitals where hernia surgery was recorded as the principal procedure (highest value MBS fee from the medical claim) for the hospital admission. The analysis is limited to those 4,605 procedures. 782 surgeons (identified through the stem of their Medicare provider number) billed Medibank for those procedures. 332 (42%) of these surgeons billed Medibank for five or more procedures in 2014. Surgeon-level analysis of the indicators considered for this procedure has been limited to those surgeons with five or more patient separations, so that each surgeon has a sufficient sample of separations from which a value (e.g. an average, median or percentage) for an indicator can be reported.

Table 8: MBS codes included in this analysis

Procedure	MBS Codes	Volume of separations	Percentage of separations	Definition
Hernia procedures	30609	1,941	42%	Femoral or inguinal hernia, laparoscopic repair of, not being a service associated with a service to which item 30614 applies
	30614	2,264	49%	Femoral or inguinal hernia or infantile hydrocele, repair of, not being a service to which item 30403 or 30615 applies, on a person 10 years of age or over
	30615	400	9%	Strangulated, incarcerated or obstructed hernia, repair of, without bowel resection, on a person 10 years of age or over

Figure 12: Median age of patients



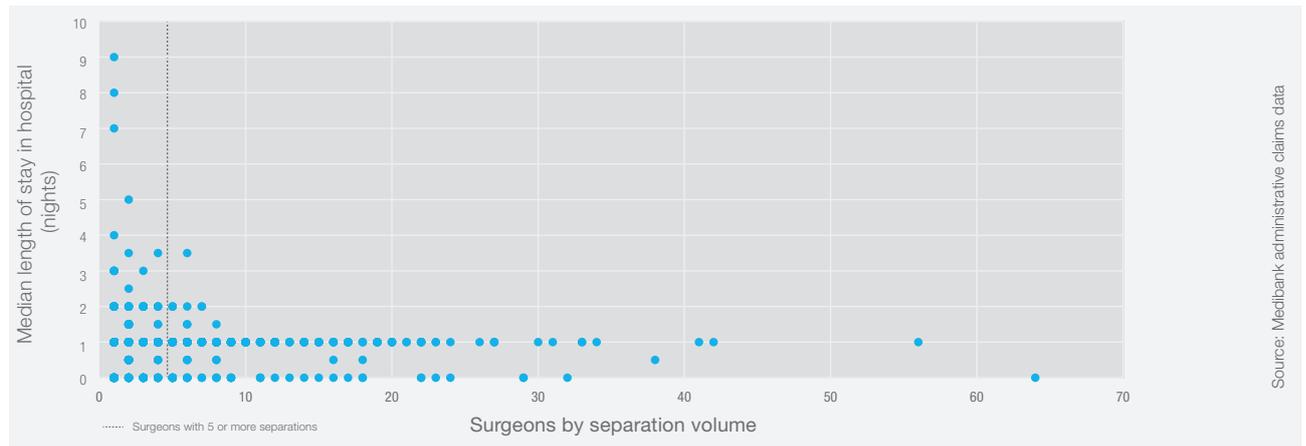
Source: Medibank administrative claims data

Across all separations the median patient age was 56 years.
 For the 332 surgeons who performed at least five procedures:

- the median age of a surgeon's patient ranged between 2 years and 79 years.

Is this variation in age clinically expected?

Figure 13: Median length of stay in hospital (nights)



Source: Medibank administrative claims data

For the 332 surgeons who performed at least five procedures:

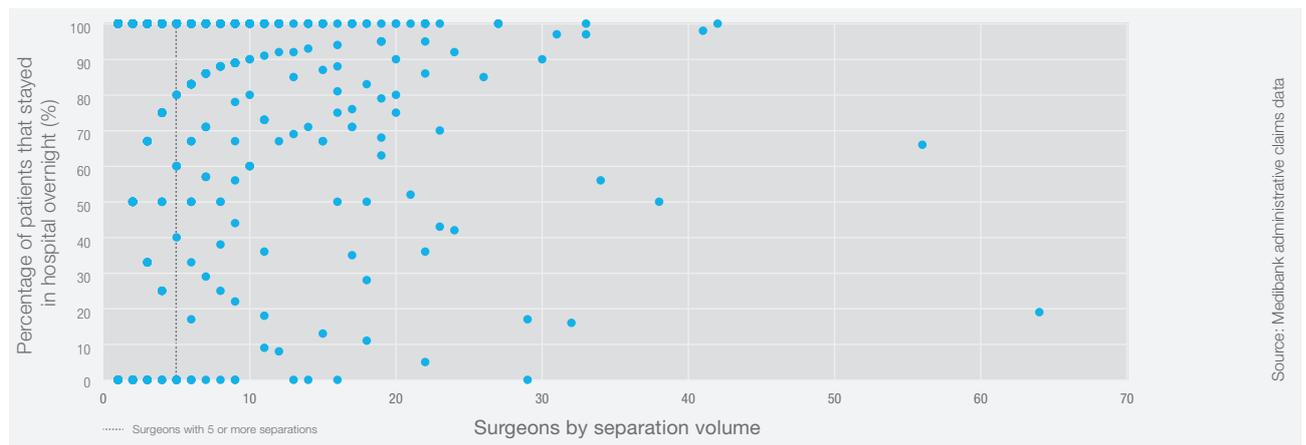
- the median number of nights that a surgeon’s patients stayed in hospital ranged between 0 nights and 3.5 nights with a median of 1 night.

Table 9: Median surgeon length of stay (nights) by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Length of stay	1	1	1	1	1	1	1	1

What would you consider the most effective length of stay for this procedure?

Figure 14: Percentage of patients that stayed in hospital overnight



Source: Medibank administrative claims data

In 80% of the hospital separations the patient stayed in hospital for at least one night. The median age of patients that stayed in hospital overnight was 64 years, compared with a median age of 52 years for patients admitted and discharged on the same day.

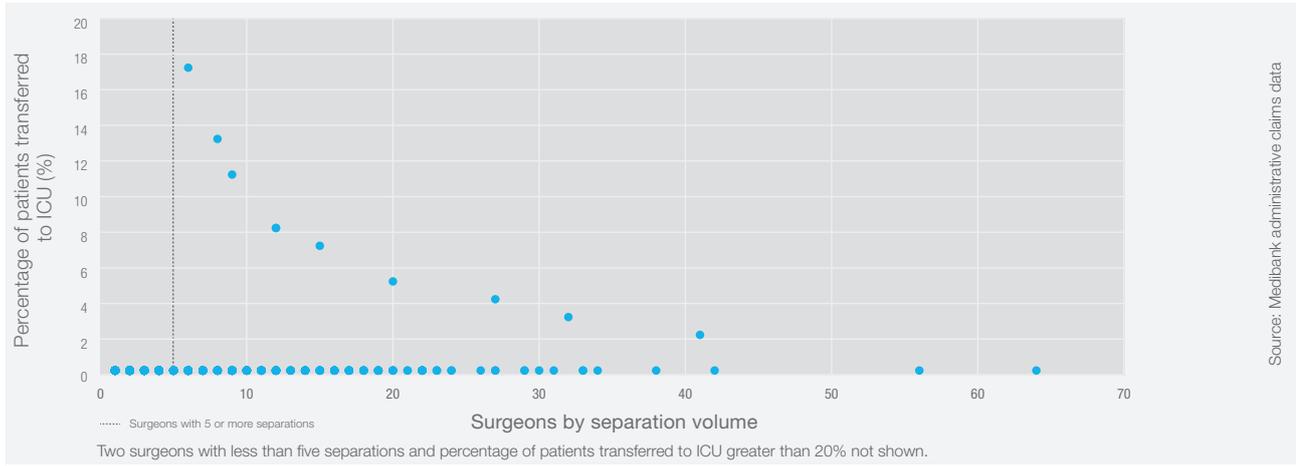
For the 332 surgeons who performed at least five procedures:

- 181 (54%), had all of their patients stay in hospital overnight
- 19 (6%), had all of their patients discharged on the same day of admission
- 132 (40%), had a mix of patients that either stayed in hospital overnight or were admitted and discharged on the same day
- The percentage of a surgeon’s patients that stayed in hospital overnight ranged between 0% and 100% with a median of 100%.

What are the reasons for a patient staying in hospital overnight following this procedure?

Why is there variation in the rate of patients that stay in hospital overnight between surgeons?

Figure 15: Percentage of patients transferred to ICU



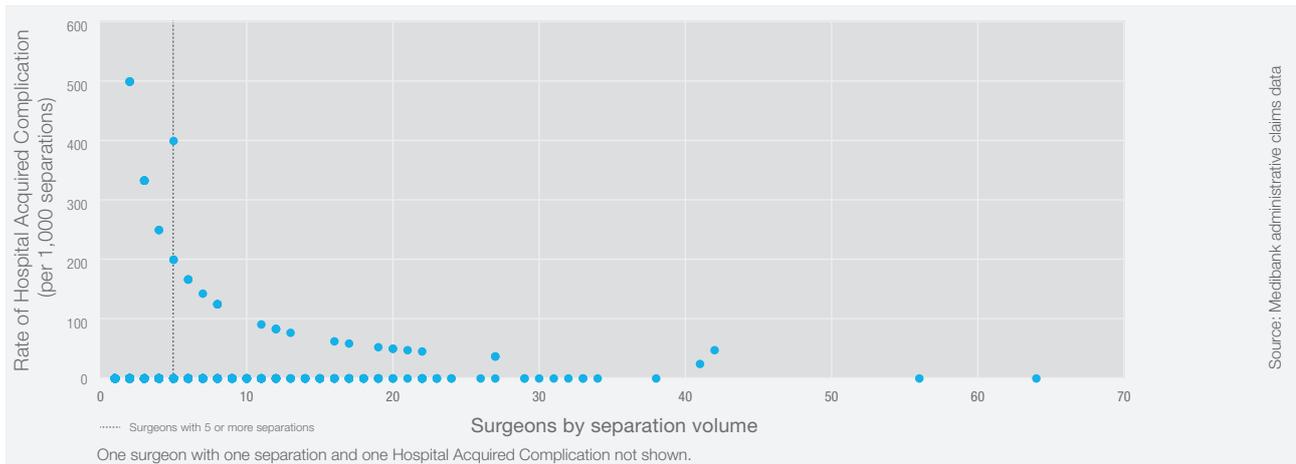
Patients were transferred to an intensive care unit (ICU) in 0.3% (13) of the hospital separations. Administrative claims data does not indicate whether the transfers were planned or unplanned.

For the 332 surgeons who performed at least five procedures:

- 10 (3%) surgeons had one or more patient separations during which patients were transferred to ICU
- The percentage of a surgeon’s patients that were transferred to ICU ranged between 0% and 17% with a median of 0%.

Given that ICU transfers could indicate a difficult post-operative recovery, what would be the expected transfer rate?

Figure 16: Rate of Hospital Acquired Complications (per 1,000 separations)



Hospital Acquired Complications are a Medibank subset of 82 International Classification of Diseases (ICD) codes drawn from the Australian Commission of Safety and Quality in Health Care’s list of high priority complications (see Table 55).

The rate of Hospital Acquired Complications was 9.1 per 1,000 separations.

For the 332 surgeons who performed at least five procedures:

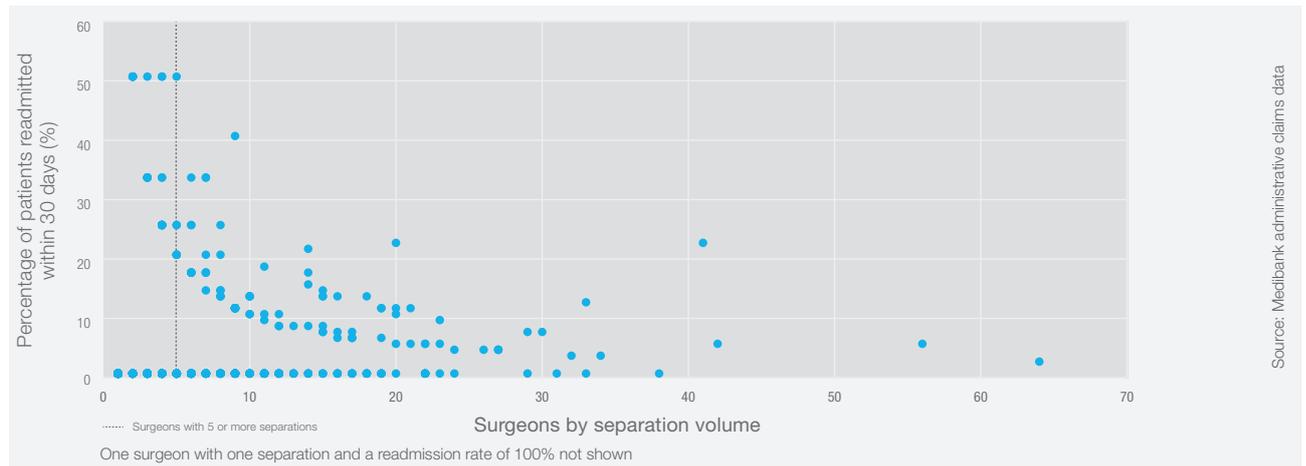
- 27 (8%) surgeons had one or more separations during which a Hospital Acquired Complication was identified
- The rate of Hospital Acquired Complications for a surgeon ranged between 0 per 1,000 separations to 400 per 1,000 separations with a median of 0 per 1,000 separations.

Table 10: Hospital Acquired Complications identified during the hospital separation

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	0	42	0	42

What complications have you had for this procedure?

Figure 17: Percentage of patients readmitted within 30 days



Following 165 (3.9%) hospital separations, patients were readmitted (for all causes)* to a hospital within 30 days. Administrative claims data does not indicate whether the readmissions were planned or unplanned. The median age of patients readmitted was 66 years, compared with a median age of 60 years for patients not readmitted. The readmission rate was much lower for patients aged 9 years or less (0.9%) compared with patients aged 10 years or older (4.1%). Of the 165 readmissions:

- 134 readmissions were to a private hospital (the same one or a different hospital). In 23 of these separations at least one Hospital Acquired Complication was identified (see Table 11)
- 31 readmissions were to a public hospital (where the patient was treated as a private patient).

For the 332 surgeons who performed at least five procedures, the percentage of a surgeon’s patients readmitted within 30 days ranged between 0% and 50% with a median of 0%.

Readmissions to public hospitals, where patients were treated as public patients, are not captured in these datasets.

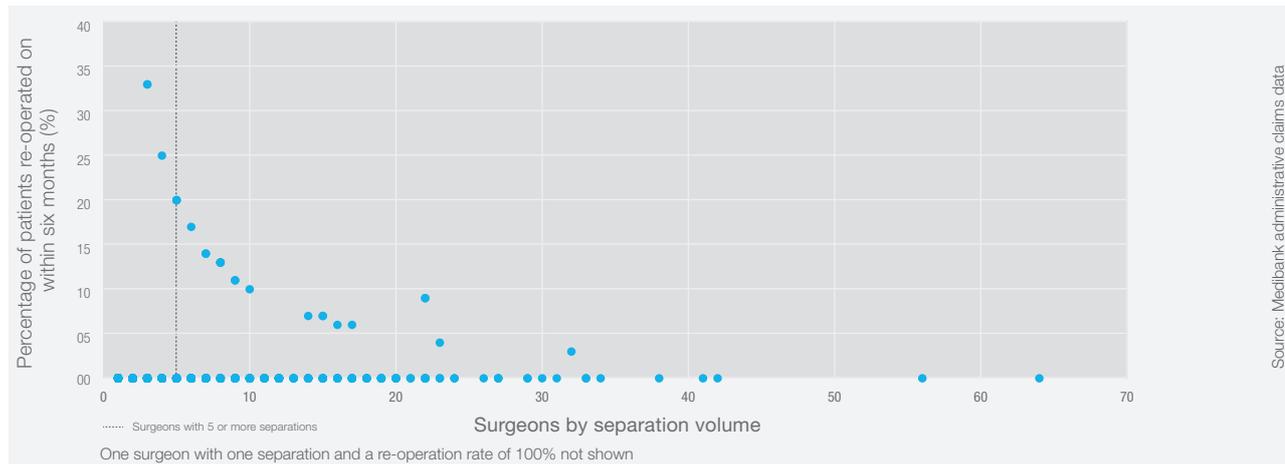
* Readmissions for rehabilitation, psychiatric treatment, dialysis and chemotherapy were excluded where identified. Separations involving a patient 80 years or older were also excluded.

Table 11: Hospital Acquired Complications identified on readmission

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	10	14	0	24

What are the reasons for readmission for this procedure, and what is the expected rate?

Figure 18: Percentage of patients re-operated on within six months



Patients were re-operated on (same procedure*) within six months of discharge from hospital, in 28 (0.6%) hospital separations. There was no difference in the median age of patients re-operated on, compared with those that were not.

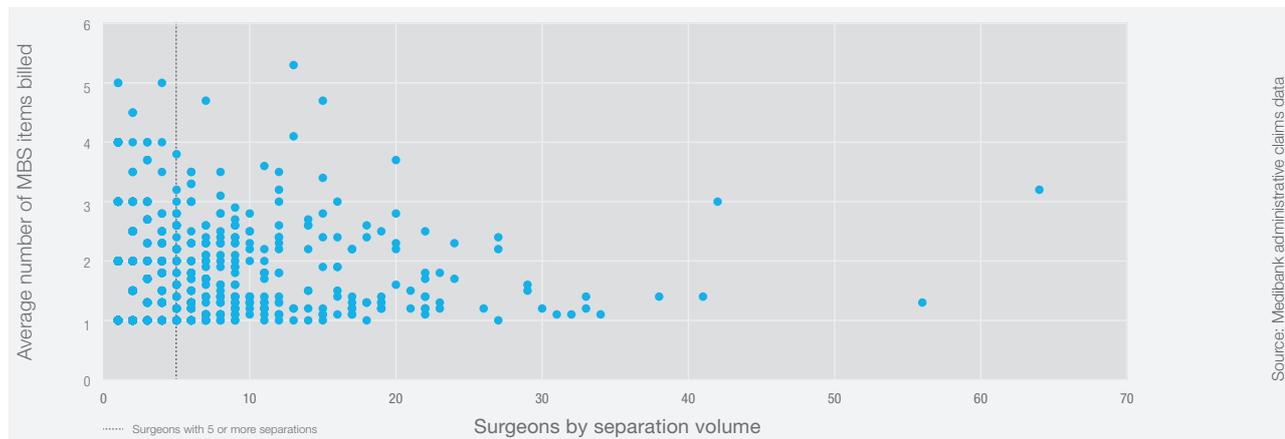
Of the 332 surgeons who performed five or more procedures:

- 22 (6.6%) had one or more patients that were re-operated on within six months
- The percentage of a surgeon’s patients re-operated on within six months ranged between 0% and 20% with a median of 0%.

* Administrative claims data does not indicate whether the re-operation was on the same side.

What are the reasons for re-operation for this procedure, and what is the expected rate?

Figure 19: Average number of MBS items billed

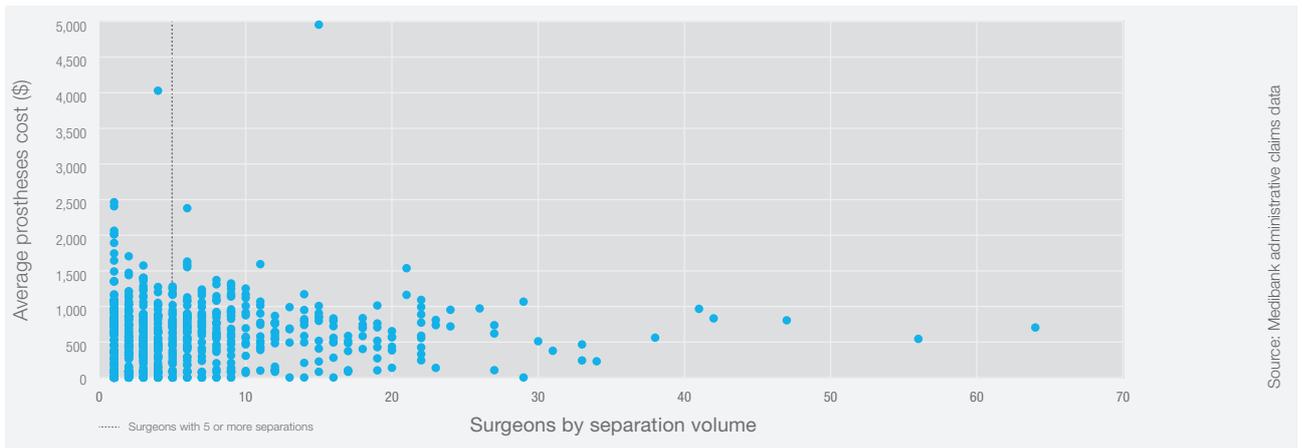


The average number of MBS items billed by a surgeon (the principal surgeon only) was 1.7 per hospital separation.

Of the 332 surgeons who performed five or more procedures, the average number of MBS items billed by a surgeon ranged between 1.0 and 5.3 with a median of 1.5.

What are the reasons for the wide variation in the number of MBS items billed?

Figure 20: Average prostheses cost



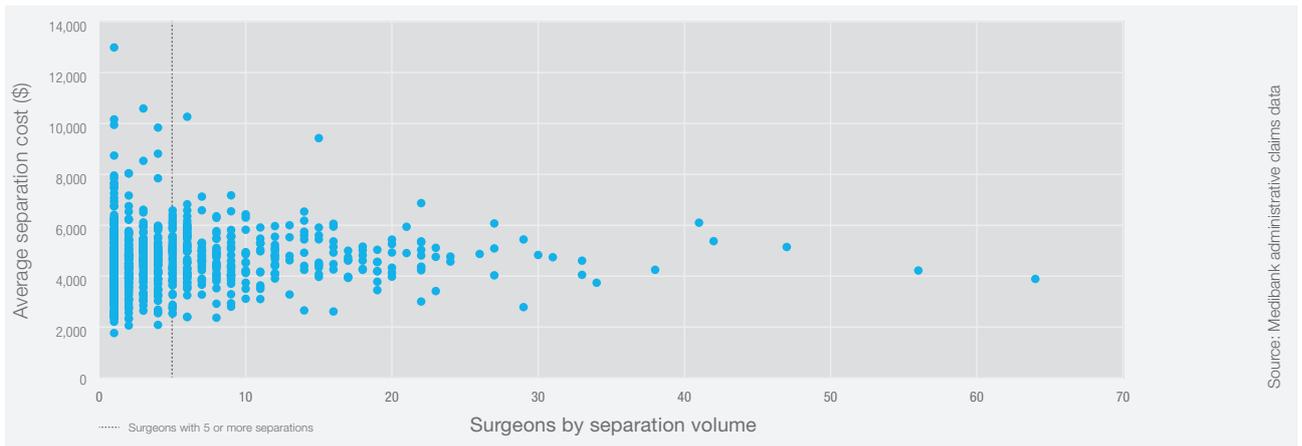
The average cost of prostheses items was \$597 per hospital separation.

For the 332 surgeons who performed at least five procedures, the average cost of prostheses for a surgeon ranged between \$0 and \$4,952, with a median of \$628.

Are you aware of the associated costs for prostheses items used for this procedure?

What are the reasons for the variation in costs between surgeons?

Figure 21: Average separation cost



The separation cost includes the total charges for the hospital separation, including payments made by Medibank, Medicare and the patient. Costs include hospital, prostheses, medical practitioners and diagnostic services. The average total cost per hospital separation was \$4,686.

For the 332 surgeons who performed at least five procedures, the average separation cost of a surgeon ranged between \$2,358 and \$10,255 with a median of \$4,734.

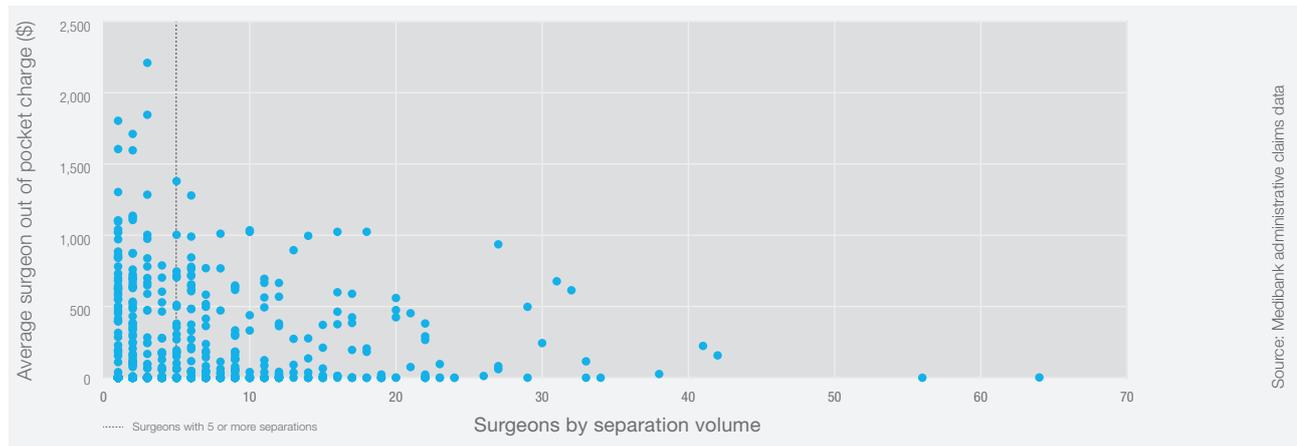
Table 12: Average separation cost by state/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Average separation cost	\$4,522	\$4,821	\$3,981	\$4,704	\$4,058	\$4,333	\$4,699	\$4,826

Are you aware of the associated costs for this procedure such as pathology, diagnostic imaging, surgical assistants, anaesthetists, hospital bed fees?

What are the reasons for variation in separation costs?

Figure 22: Average surgeon out of pocket charge



Source: Medibank administrative claims data

Patients were charged an out of pocket fee by the principal surgeon in 27% of separations and the average out of pocket charged was \$588.

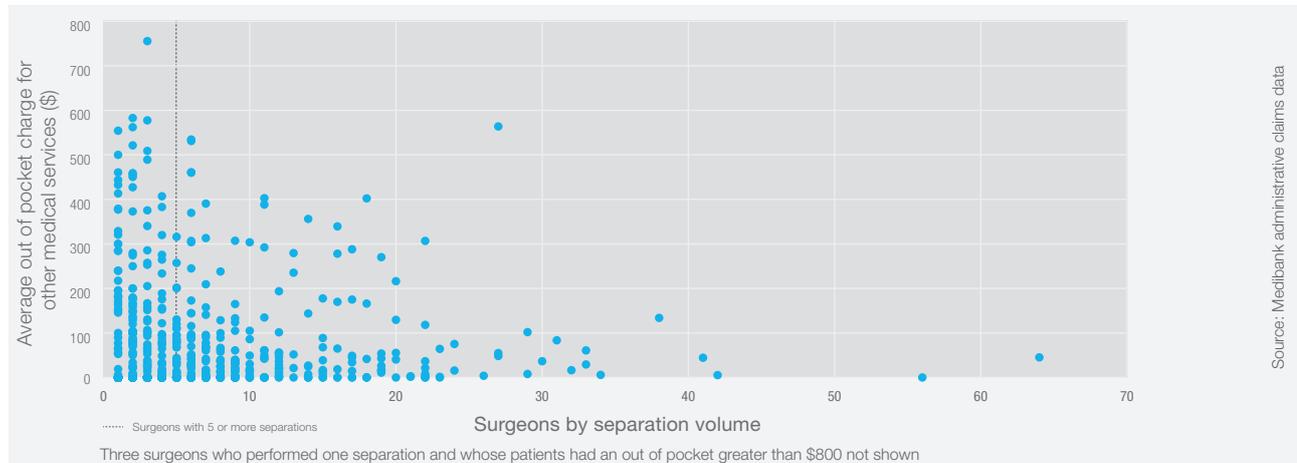
For the 332 surgeons who performed at least five procedures, 168 (51%) did not charge any of their patients an out of pocket for the hospital admission. The average out of pocket charged by these surgeons ranged from \$0 (no out of pocket charged) to \$1,380 with a median of \$0.

Table 13: Surgeon out of pocket charges by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	44%	40%	44%	32%	6%	10%	16%	25%
Average OOP	\$797	\$789	\$671	\$529	\$371	\$282	\$286	\$553

Why is there such variation in the average out of pocket charge?

Figure 23: Average out of pocket charge for other medical services



Source: Medibank administrative claims data

Three surgeons who performed one separation and whose patients had an out of pocket greater than \$800 not shown

Patients were charged an out of pocket fee for other medical services (including charges raised by the anaesthetist, assistant surgeon and for diagnostics) in 42% of the hospital separations.

For the 332 surgeons who performed at least five procedures, the average out of pocket charges received by their patients for other medical services ranged between \$0 and \$564 with a median of \$20.

Table 14: Out of pocket charges for other medical services by state

	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	82%	42%	59%	43%	43%	45%	35%	42%
Average OOP	\$357	\$244	\$203	\$132	\$77	\$138	\$71	\$112

Why is there such variation in the average out of pocket charge?

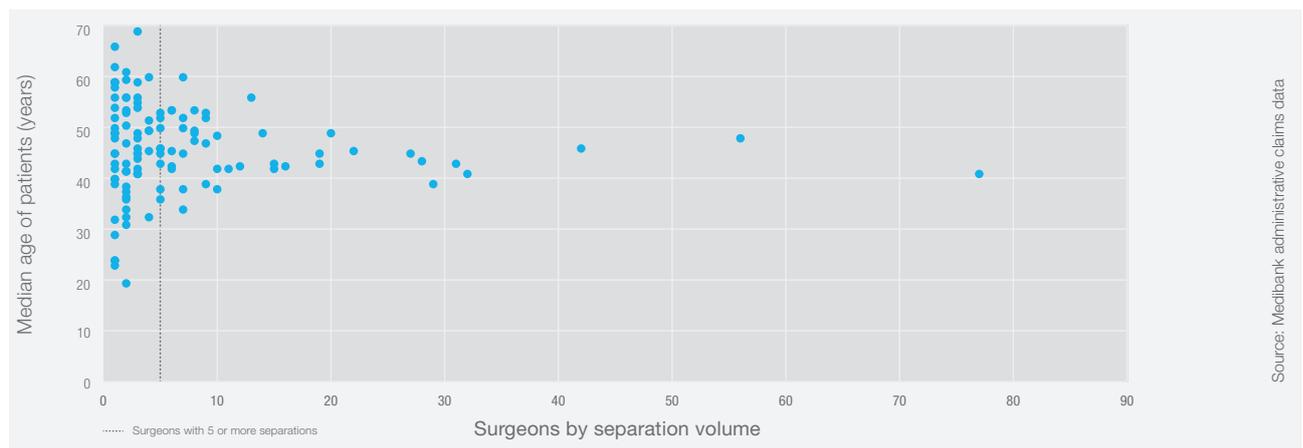
Gastric banding procedures

In 2014 Medibank funded 848 operations in private hospitals where gastric banding was recorded as the principal procedure (highest value MBS fee from the medical claim) for the hospital admission. The analysis is limited to those 848 procedures. 117 surgeons (identified through the stem of their Medicare provider number) billed Medibank for those procedures. 50 (43%) of these surgeons billed Medibank for five or more procedures. Surgeon-level analysis of the indicators considered for this procedure has been limited to those surgeons with five or more patient separations, so that each surgeon has a sufficient sample of separations from which a value (e.g. an average, median or percentage) for an indicator can be reported.

Table 15: MBS codes included in this analysis

Procedure	MBS Codes	Volume of separations	Percentage of separations	Definition
Gastric banding procedures	31569	678	80%	Adjustable gastric band, placement of, with or without crural repair taking 45 minutes or less, for a patient with clinically severe obesity
	31572	163	19%	Gastric bypass by Roux-en-Y including associated anastomoses, with or without crural repair taking 45 minutes or less, for a patient with clinically severe obesity not being associated with a service to which item 30515 applies
	31581	7	1%	Gastric bypass by biliopancreatic diversion with or without duodenal switch including gastric resection and anastomoses, with or without crural repair taking 45 minutes or less, for a patient with clinically severe obesity

Figure 24: Median age of patients



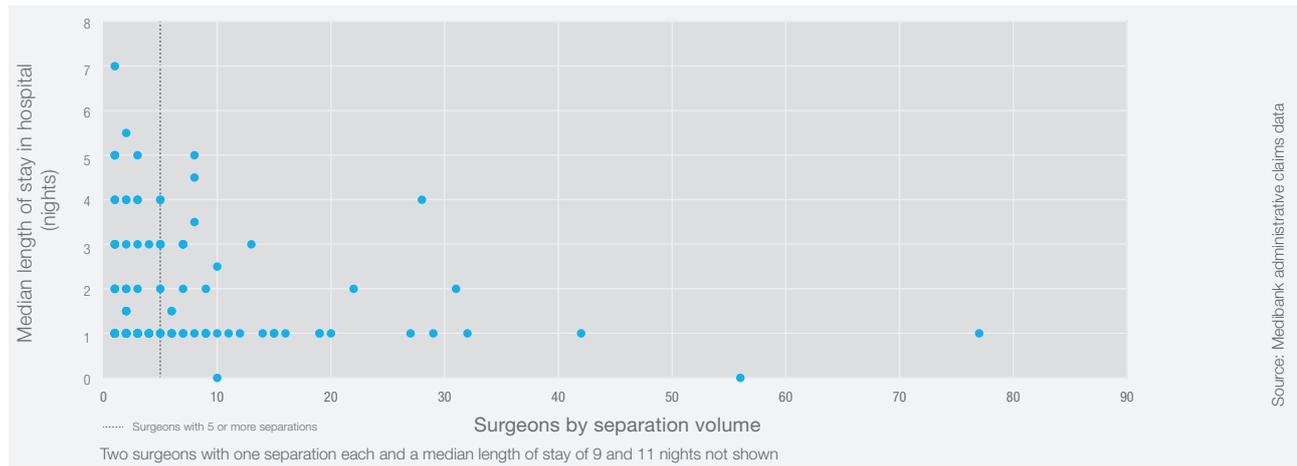
Across all separations the median patient age was 44 years.

For the 50 surgeons who performed at least five procedures:

- The median age of a surgeon's patients ranged between 33 years and 59 years.

Is this variation in age clinically expected?

Figure 25: Median length of stay in hospital (nights)



For the 50 surgeons who performed at least five procedures:

- The median number of nights that a surgeon’s patients stayed in hospital ranged between 0 nights and 5 nights with a median of 1 night.

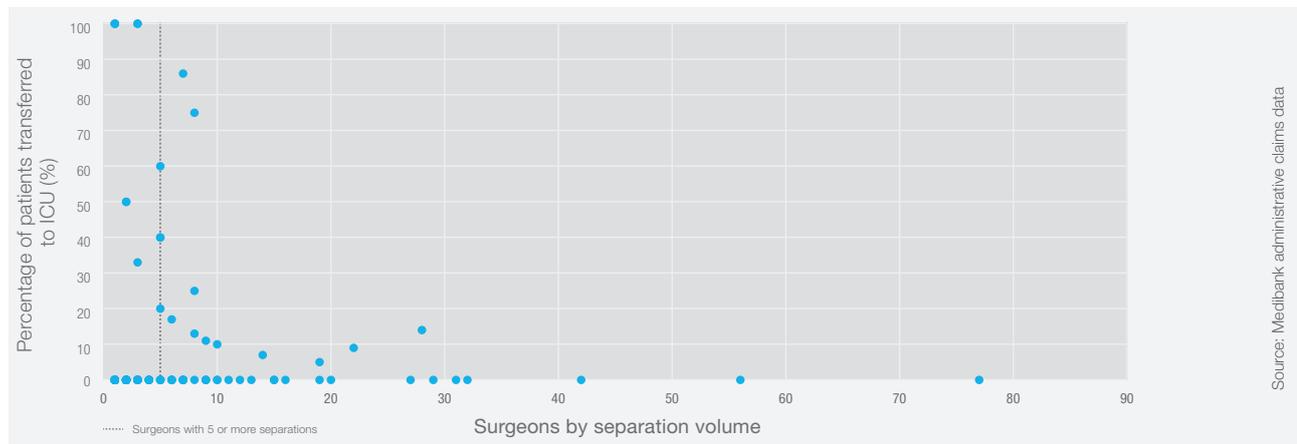
Table 16: Median length of stay (nights) by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Length of stay	NA*	1	NA*	1	2	NA*	1	1

* State/territory values not reported if dataset includes less than five surgeons

What would you consider the most effective length of stay for this procedure?

Figure 26: Percentage of patients transferred to ICU



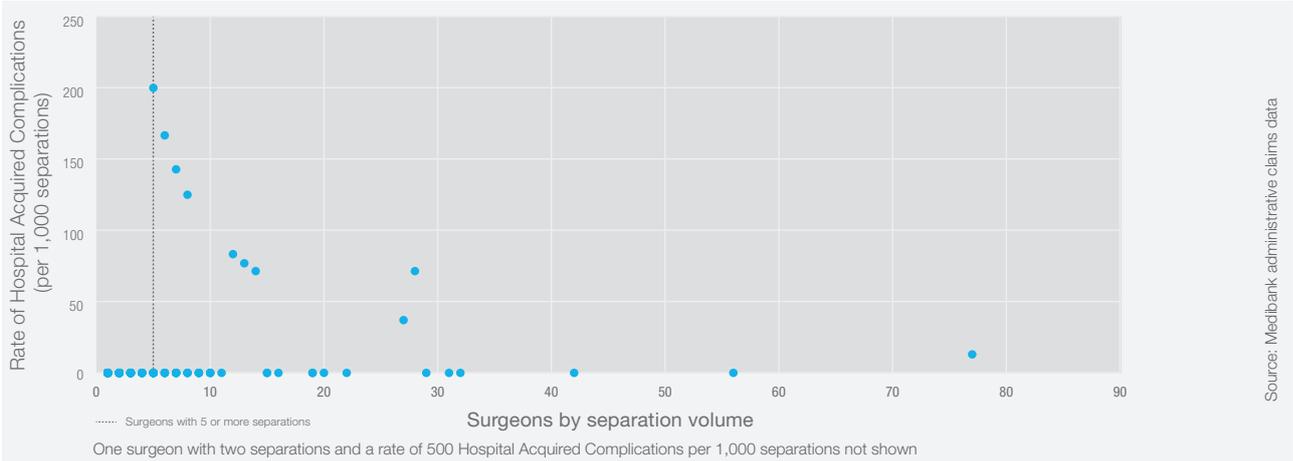
Across the total sample of 848 hospital separations, patients were transferred to an intensive care unit (ICU) during 46 hospital separations (5.4%). Administrative claims data does not indicate whether the transfers were planned or unplanned.

For the 50 surgeons who performed at least five procedures:

- 15 (30%) surgeons had one or more patient separations during which patients were transferred to ICU
- The percentage of a surgeon’s patients that were transferred to ICU ranged between 0% and 86% with a median of 0%.

Given that ICU transfers could indicate a difficult post-operative recovery, what would be the expected transfer rate?

Figure 27: Rate of Hospital Acquired Complications (per 1,000 separations)



Hospital Acquired Complications are a Medibank subset of 82 International Classification of Diseases (ICD) codes drawn from the Australian Commission of Safety and Quality in Health Care’s list of high priority complications (see Table 55).

The rate of Hospital Acquired Complications was 14 per 1,000 hospital separations.

For the 50 surgeons who performed at least five procedures:

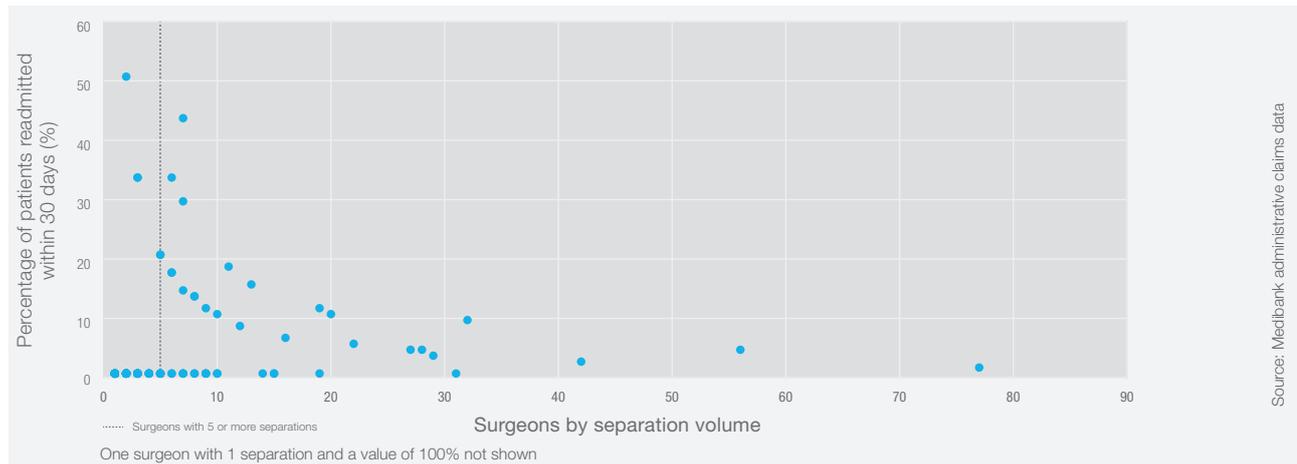
- 10 (20%) surgeons had one or more patient separations during which a Hospital Acquired Complication was identified
- The rate of Hospital Acquired Complications for a surgeon ranged between 0 per 1,000 separations to 200 per 1,000 separations with a median of 0 per 1,000 separations.

Table 17: Hospital Acquired Complications identified during the hospital separation

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	0	12	0	12

What complications have you had for this procedure?

Figure 28: Percentage of patients readmitted within 30 days



In 45 (5.3%) of the hospital separations patients were readmitted (for all causes)* to a hospital within 30 days. Administrative claims data does not indicate whether the readmissions were planned or unplanned. The median age of patients readmitted was 42 years, compared with a median age of 44 years for those patients not readmitted. For the 45 readmissions:

- 38 readmissions were to a private hospital (the same one or a different hospital). In four of these separations a Hospital Acquired Complication was identified (see Table 18).
- 7 readmissions were to a public hospital (where the patient was treated as a private patient).

For the 50 surgeons who performed at least five procedures, the percentage of a surgeon's patients readmitted within 30 days ranged between 0% and 43% with a median of 2%.

Readmissions to public hospitals, where patients were treated as public patients, are not captured in these datasets.

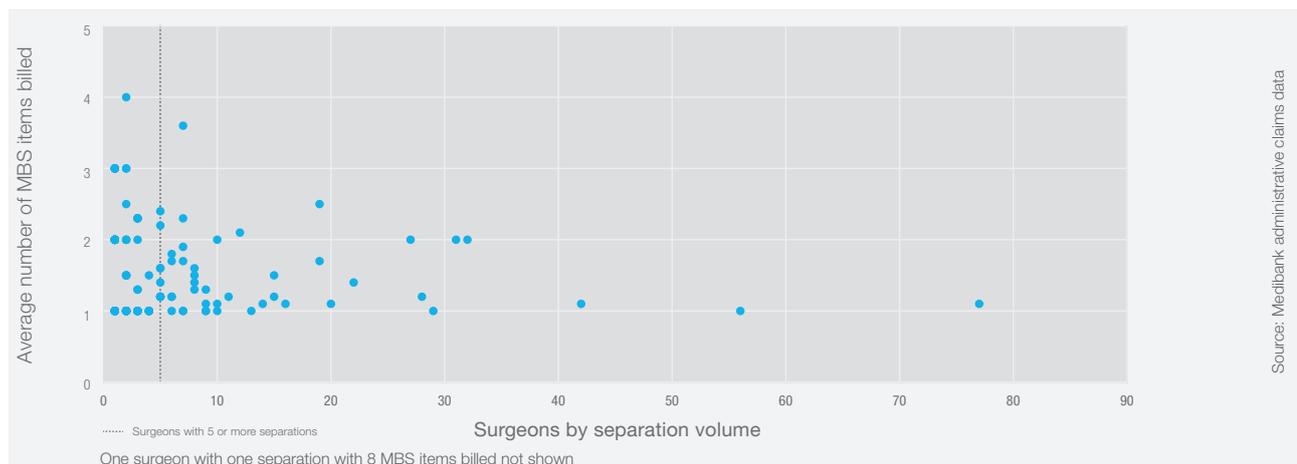
* Readmissions for rehabilitation, psychiatric treatment, dialysis and chemotherapy were excluded where identified. Separations involving a patient 80 years or older were also excluded.

Table 18: Hospital Acquired Complications identified on readmission

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	3	1	0	4

What are the reasons for readmission for this procedure, and what is the expected rate?

Figure 29: Average number of MBS items billed

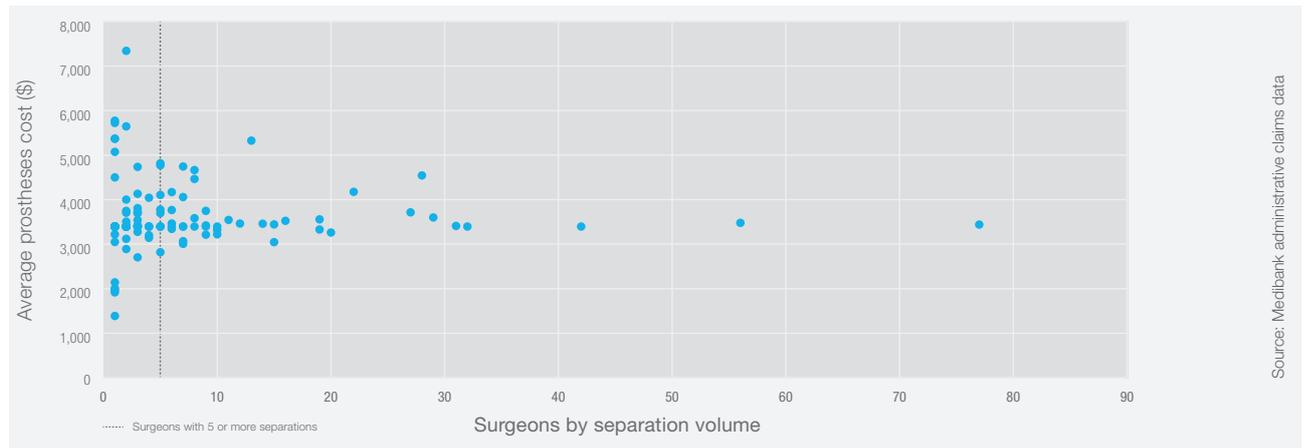


The average number of MBS items billed by the surgeon (the principal surgeon only) was 1.4 per hospital separation.

Of the 50 surgeons who performed five or more procedures, the average number of MBS items billed by a surgeon ranged between 1 and 3.6 with a median of 1.2.

What are the reasons for the wide variation in the number of MBS items billed?

Figure 30: Average prostheses cost



Source: Medibank administrative claims data

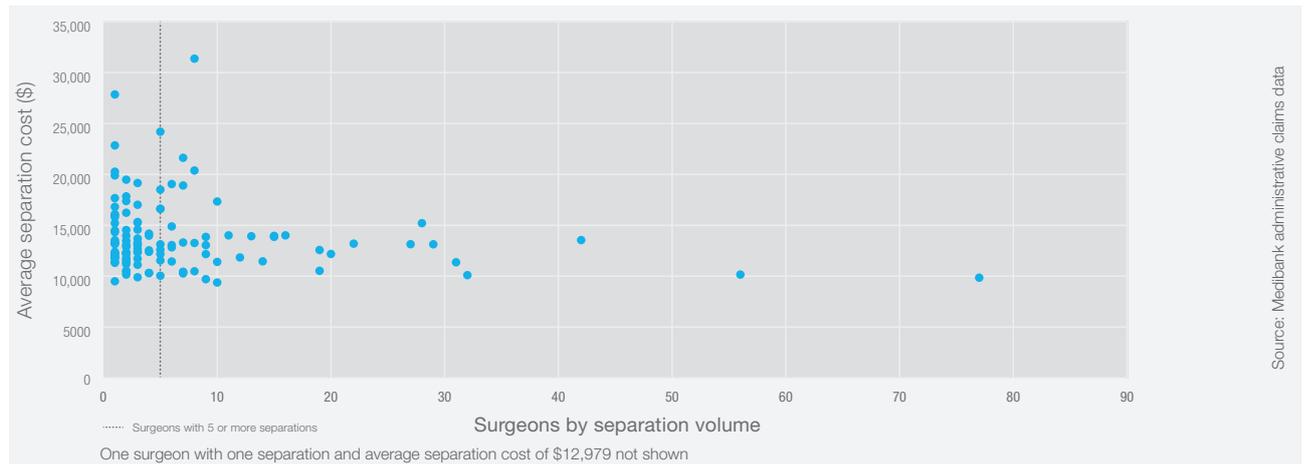
The average cost of prostheses items was \$3,509 per hospital separation.

For the 50 surgeons who performed at least five procedures, the average cost of prostheses for a surgeon ranged between \$2,724 and \$5,230 with a median of \$3,356.

Are you aware of the associated costs for prostheses items used for this procedure?

What are the reasons for the variation in costs between surgeons?

Figure 31: Average separation cost



Source: Medibank administrative claims data

One surgeon with one separation and average separation cost of \$12,979 not shown

The separation cost includes the total charges for the hospital separation including payments made by Medibank, Medicare and the patient. Costs include hospital, prostheses, medical practitioners and diagnostic services. The average total cost per hospital separation was \$12,476.

For the 50 surgeons who performed at least five procedures, the average separation cost for a surgeon ranged between \$8,960 and \$30,953 with a median of \$12,675.

Table 19: Average separation cost by State/territory

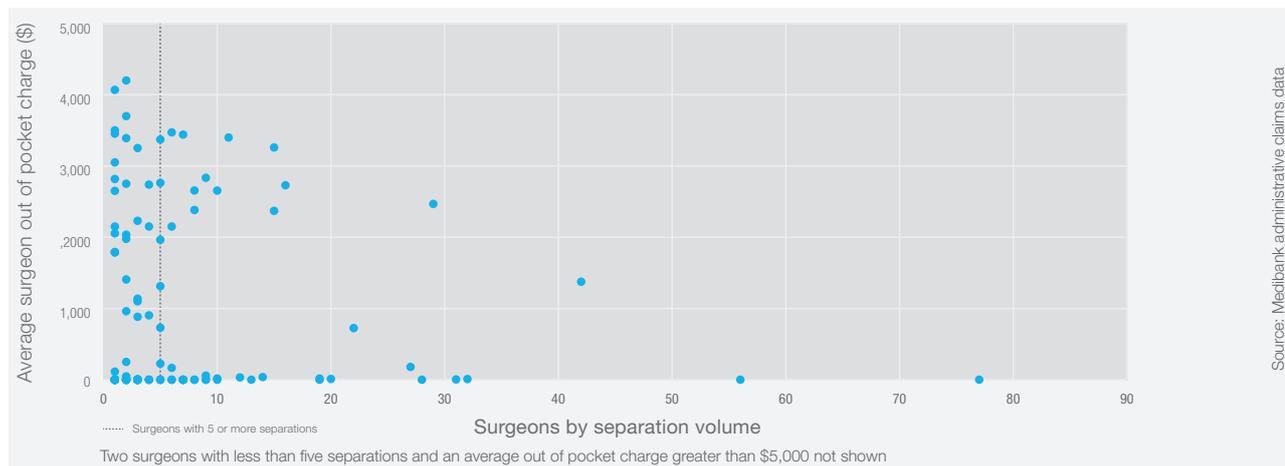
State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Average separation cost	NA*	\$12,284	NA*	\$13,553	\$13,061	NA*	\$12,650	\$11,080

* State/territory values not reported if dataset includes less than five surgeons

Are you aware of the associated costs for this procedure such as pathology, diagnostic imaging, surgical assistants, anaesthetists, hospital bed fees?

What are the reasons for variation in separation costs?

Figure 32: Average surgeon out of pocket charge



Patients were charged an out of pocket fee by the surgeon in 30% of separations. For the 50 surgeons who performed at least five procedures, 19 (38%) did not charge any of their patients an out of pocket for the hospital admission. The average out of pocket charged by each surgeon ranged from \$0 (no out of pocket) to a maximum of \$3,472, with a median of \$25.

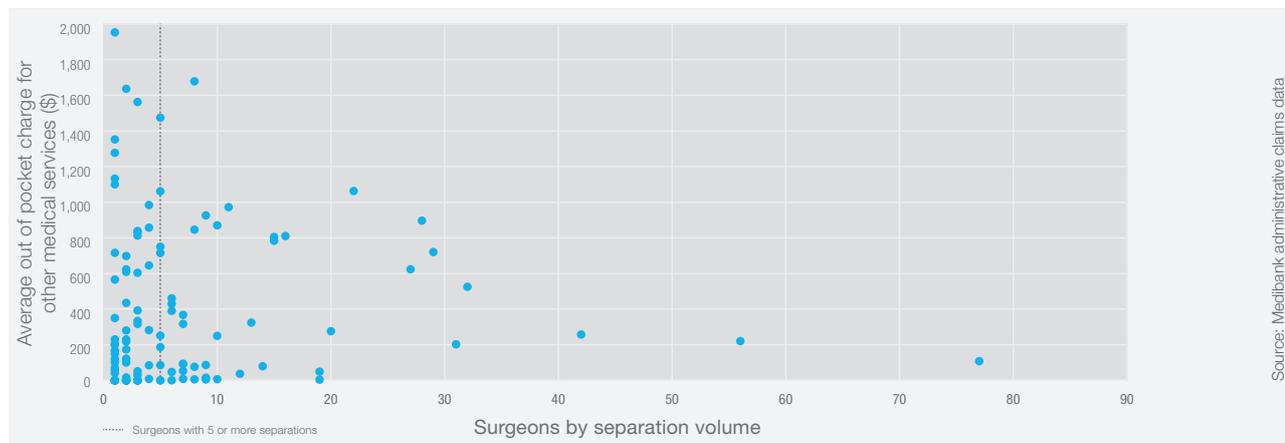
Table 20: Surgeon out of pocket charges by state/territory

	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	NA*	47%	NA*	43%	7%	NA*	25%	17%
Average OOP	NA*	\$2,561	NA*	\$3,485	\$2,070	NA*	\$2,730	\$2,053

* State/territory values not reported if dataset includes less than five surgeons

Why is there such variation in the average out of pocket charge?

Figure 33: Average out of pocket charge for other medical services



Patients were charged an out of pocket fee for other medical services (including charges raised by the anaesthetist, assistant surgeon and for diagnostics) in 71% of separations and the average charge was \$541. For the 50 surgeons who performed at least five procedures, the average out of pocket charges received by their patients for other medical services ranged between \$0 and \$1,679 with a median of \$254.

Table 21: Out of pocket charges for other medical services by state

	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	NA*	68%	NA*	83%	72%	NA*	72%	51%
Average OOP	NA*	\$678	NA*	\$778	\$513	NA*	\$512	\$397

* State/territory values not reported if dataset includes less than five surgeons

Why is there such variation in the average out of pocket charge?

Gastric sleeve procedures

In 2014 Medibank funded 1,964 operations in private hospitals where gastric sleeve surgery was recorded as the principal procedure (highest value MBS fee from the medical claim) for the hospital admission. The analysis is limited to those 1,964 procedures. 131 surgeons (identified through the stem of their Medicare provider number) billed Medibank for those procedures. 83 (63%) of these surgeons undertook five or more procedures. Surgeon-level analysis of the indicators considered for this procedure has been limited to those surgeons with five or more patient separations, so that each surgeon has a sufficient sample of separations from which a value (e.g. an average, median or percentage) for an indicator can be reported.

Table 22: MBS codes included in this analysis

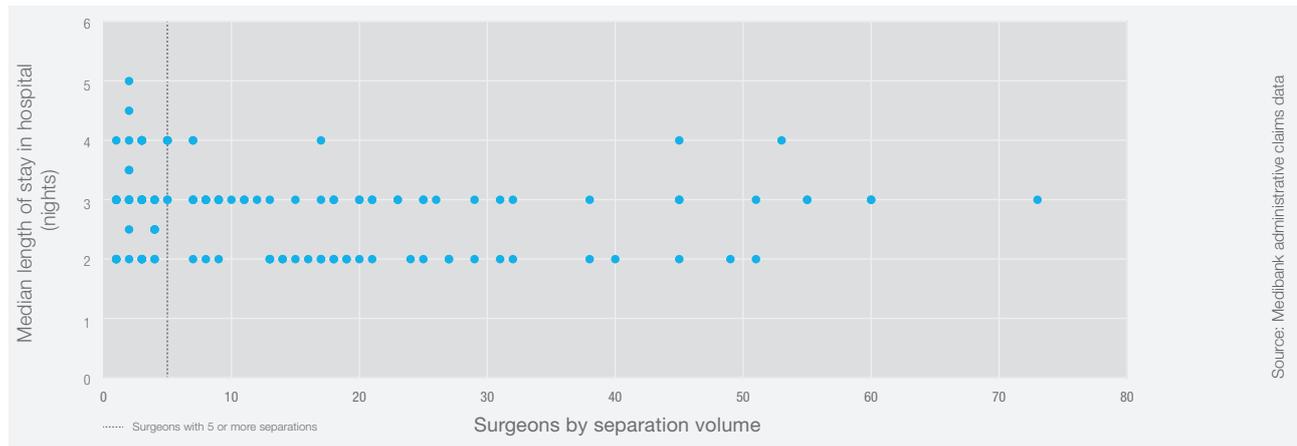
Procedure	MBS Codes	Volume of separations	Percentage of separations	Definition
Gastric sleeve procedures	31575	1,964	100%	Sleeve gastrectomy, with or without crural repair taking 45 minutes or less, for a patient with clinically severe obesity

Figure 34: Median age of patients



Is this variation in age clinically expected?

Figure 35: Median length of stay in hospital (nights)



For the 83 surgeons who performed at least five procedures:

- The median number of nights that a surgeon’s patients stayed in hospital ranged between 2 nights and 4 nights with a median of 3 nights.

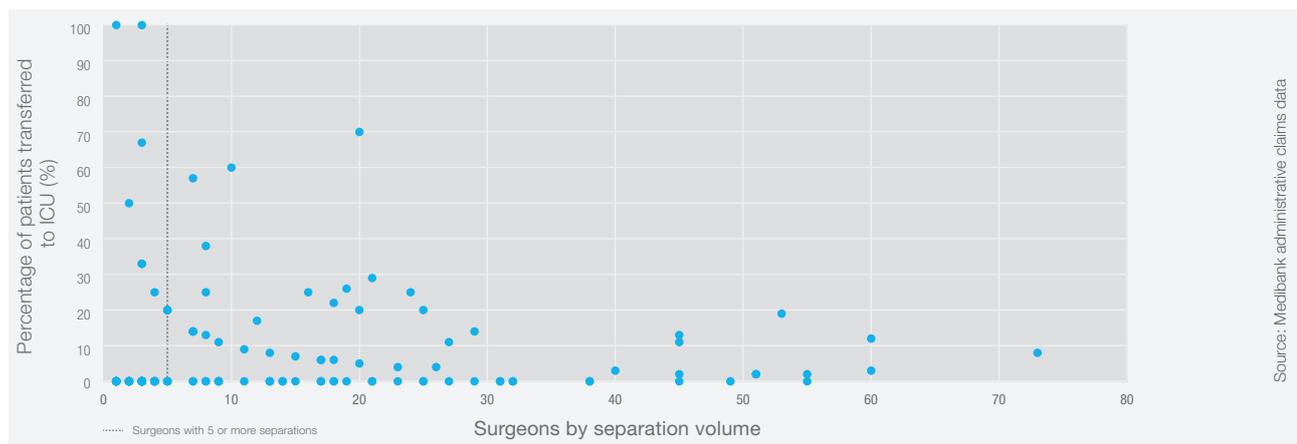
Table 23: Median length of stay (nights) by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Length of stay	NA*	3	NA*	3	4	NA*	3	3

* State/territory values not reported if dataset includes less than five surgeons

What would you consider the most effective length of stay for this procedure?

Figure 36: Percentage of patients transferred to ICU



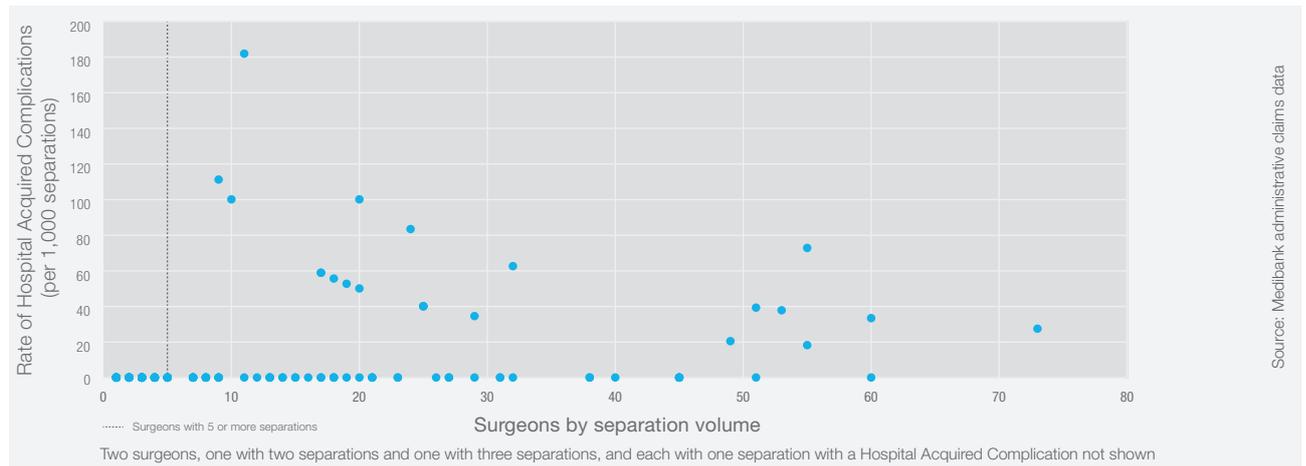
Patients were transferred to an intensive care unit (ICU) during 140 (7%) hospital separations. Administrative claims data does not indicate whether the transfers were planned or unplanned.

For the 83 surgeons who performed at least five procedures:

- 43 (52%) surgeons had one or more patient separations during which patients were transferred to ICU
- The percentage of a surgeon’s patients that were transferred to ICU ranged between 0% and 70% with a median of 2%.

Given that ICU transfers could indicate a difficult post-operative recovery, what would be the expected transfer rate?

Figure 37: Rate of Hospital Acquired Complications (per 1,000 separations)



Hospital Acquired Complications are a Medibank subset of 82 International Classification of Diseases (ICD) codes drawn from the Australian Commission of Safety and Quality in Health Care’s list of high priority complications (see Table 55).

Across the total sample of hospital separations, the rate of Hospital Acquired Complications was 18 per 1,000 separations.

For the 83 surgeons who performed at least five procedures:

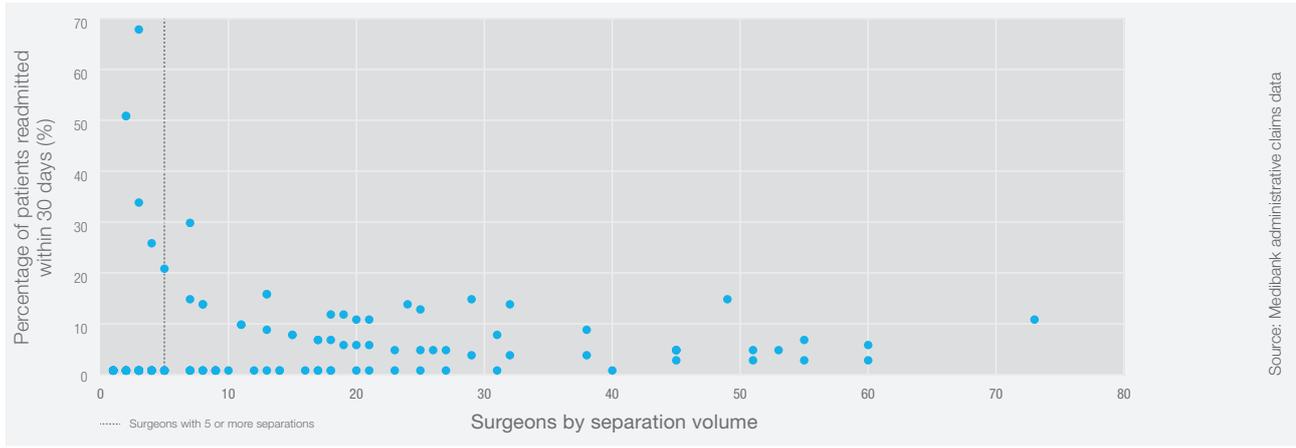
- 22 (27%) surgeons had one or more separations during which a Hospital Acquired Complication was identified
- The rate of Hospital Acquired Complications for a surgeon ranged between 0 per 1,000 separations to 182 per 1,000 separations, with a median of 0 per 1,000 separations.

Table 24: Hospital Acquired Complications identified during the hospital separation

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	3	32	0	35

What complications have you had for this procedure?

Figure 38: Percentage of patients readmitted within 30 days



Source: Medibank administrative claims data

Following 95 (4.8%) of separations, patients were readmitted (for all causes)* to a hospital within 30 days. Administrative claims data does not indicate whether the readmissions were planned or unplanned. There was no difference in the median age of patients readmitted and those not readmitted (43 years). Of the 95 separations followed by a readmission:

- 69 readmissions were to a private hospital (the same or a different private hospital). In eight of these separations one or more Hospital Acquired Complications were identified, a total of 10 Hospital Acquired Complications recorded in eight readmissions, (see Table 25).
- 26 readmissions were to a public hospital (where the patient was treated as a private patient).

For the 83 surgeons who performed at least five procedures, the percentage of a surgeon’s patients readmitted within 30 days ranged between 0% and 29% with a median of 3%.

Readmissions to public hospitals, where patients were treated as public patients, are not captured in these datasets.

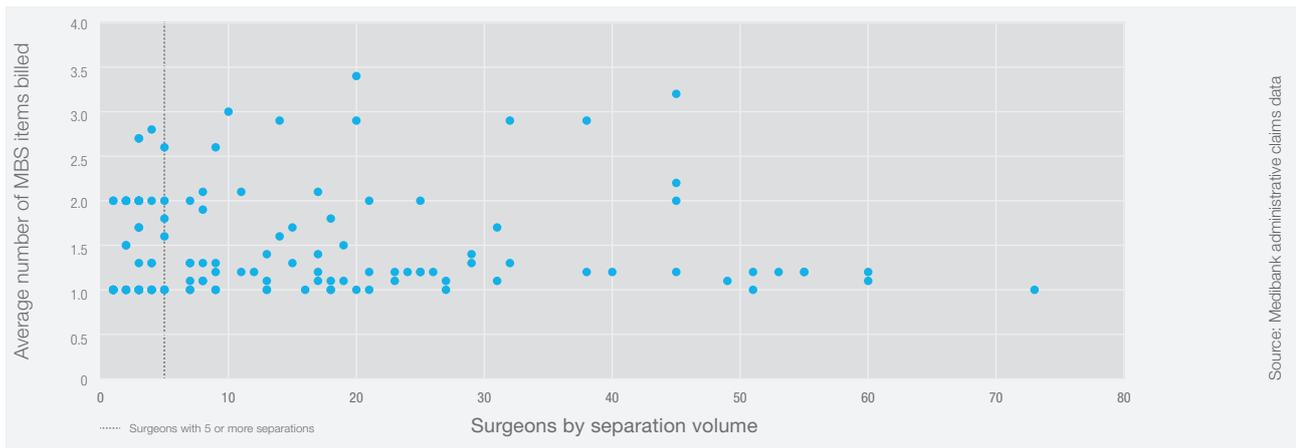
* Readmissions for rehabilitation, psychiatric treatment, dialysis and chemotherapy were excluded where identified. Separations involving a patient 80 years or older were also excluded.

Table 25: Hospital Acquired Complications identified on readmission

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	6	4	0	10

What are the reasons for readmission for this procedure, and what is the expected rate?

Figure 39: Average number of MBS items billed



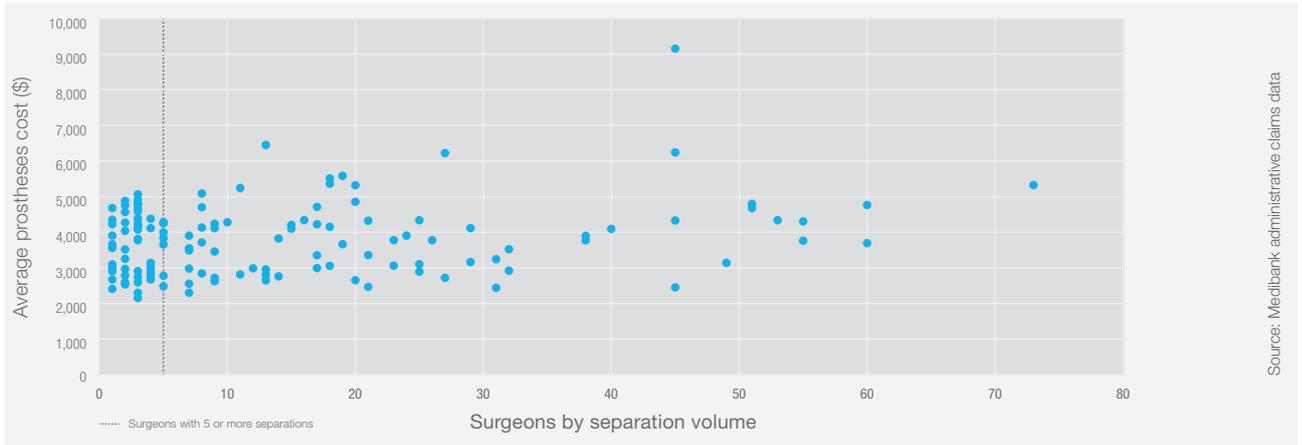
Source: Medibank administrative claims data

The average number of MBS items billed by the surgeon (the principal surgeon only) was 1.5 per hospital separation.

For the 83 surgeons who performed five or more procedures, the average number of MBS items billed by a surgeon ranged between 1 and 3.4 with a median of 1.2.

What are the reasons for the wide variation in the number of MBS items billed?

Figure 40: Average prostheses cost

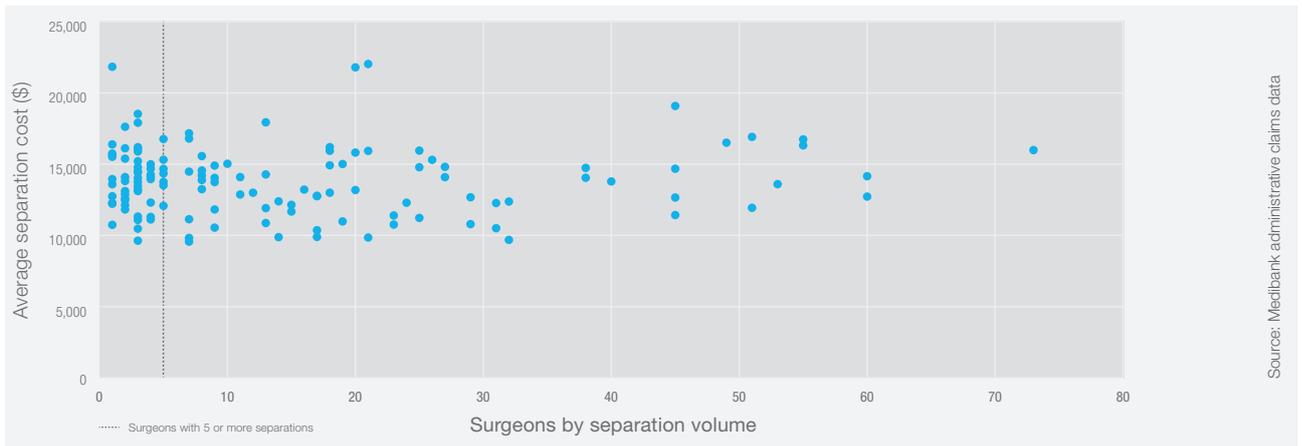


Source: Medibank administrative claims data

The average cost of prostheses items was \$3,949 per hospital separation. For the 83 surgeons who performed at least five procedures, the average cost of prostheses used by a surgeon ranged between \$2,183 and \$9,035 with a median of \$3,658.

**Are you aware of the associated costs for prostheses items used for this procedure?
What are the reasons for the variation in costs between surgeons?**

Figure 41: Average separation cost



Source: Medibank administrative claims data

The separation cost includes the total charges for the hospital separation, including payments made by Medibank, Medicare and the patient. Costs include hospital, prostheses, medical practitioners and diagnostic services. The average total cost was \$13,660 per hospital separation. For the 83 surgeons who performed at least five procedures, the average separation cost of a surgeon ranged between \$9,268 and \$21,736 with a median of \$13,460.

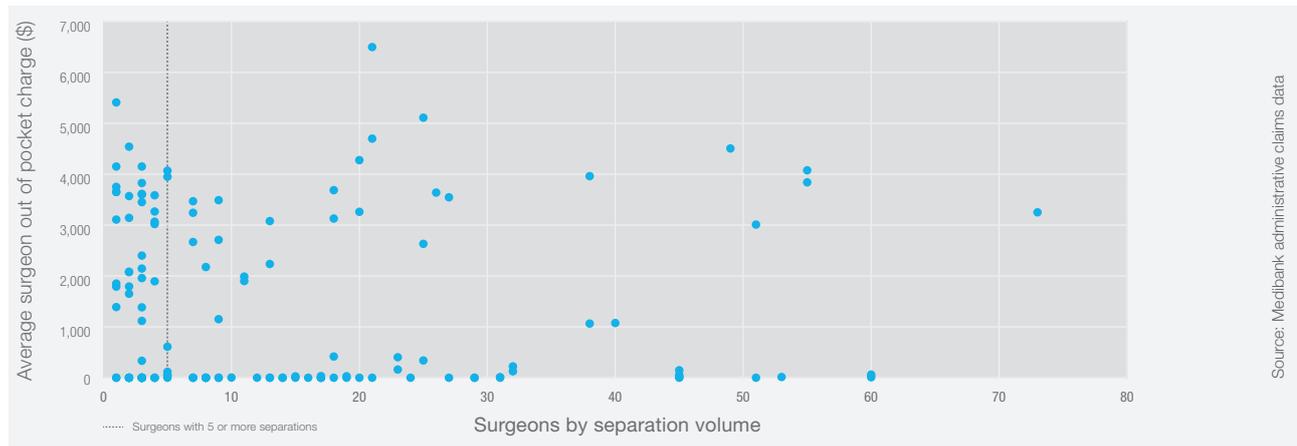
Table 26: Average separation cost by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Average separation cost	NA*	\$12,687	NA*	\$14,372	\$13,105	NA*	\$13,189	\$14,155

* State/territory values not reported if dataset includes less than five surgeons

**Are you aware of the associated costs for this procedure such as pathology, diagnostic imaging, surgical assistants, anaesthetists, hospital bed fees?
What are the reasons for variation in separation costs?**

Figure 42: Average surgeon out of pocket charge



Source: Medibank administrative claims data

Patients were charged an out of pocket fee by the principal surgeon in 45% of separations and the average out of pocket charged was \$3,122.

For the 83 surgeons who performed at least five procedures, 30 (36%) did not charge any of their patients an out of pocket for the hospital admission. The average out of pocket charge for a surgeon ranged from \$0 (no out of pocket charge) to a maximum of \$6,498. The median average out of pocket charged was \$54.

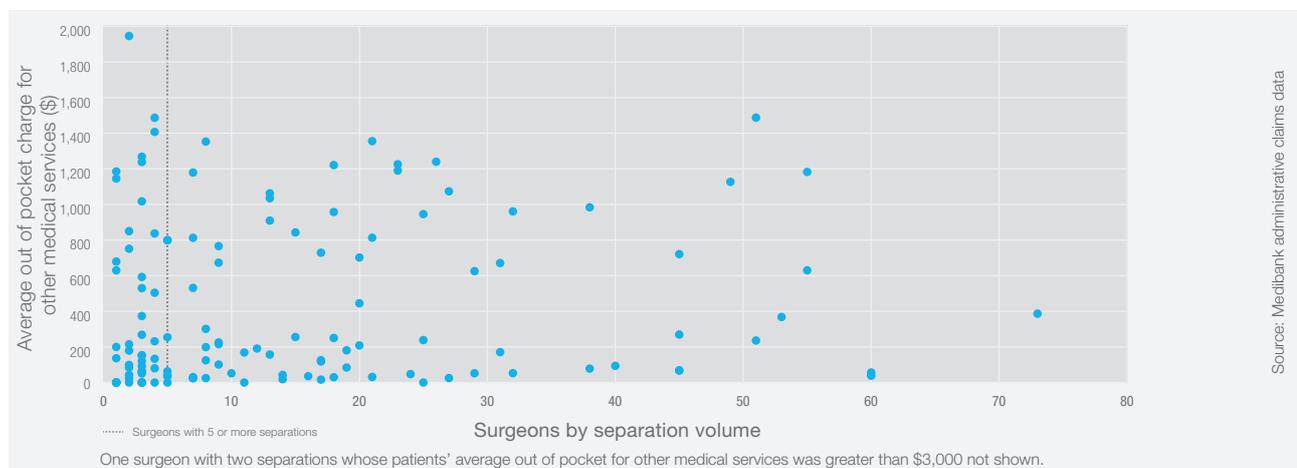
Table 27: Surgeon out of pocket charges by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	NA*	37%	NA*	59%	1%	NA*	40%	46%
Average OOP	NA*	\$3,160	NA*	\$3,593	\$231	NA*	\$1,874	\$2,777

* State/territory values not reported if dataset includes less than five surgeons

Why is there such variation in the average out of pocket charge?

Figure 43: Average out of pocket charge for other medical services



Source: Medibank administrative claims data

One surgeon with two separations whose patients' average out of pocket for other medical services was greater than \$3,000 not shown.

Patients were charged an out of pocket fee for other medical services (including charges raised by the anaesthetist, assistant surgeon and for diagnostics) in 78% of hospital separations.

For the 83 surgeons who performed at least five procedures, the average out of pocket charges received by a surgeon's patients for other medical services ranged between \$0 and \$1,487 with a median of \$236.

Table 28: Out of pocket charges for other medical services by state

Region	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	NA*	76%	NA*	89%	65%	NA*	78%	68%
Average OOP	NA*	\$621	NA*	\$675	\$119	NA*	\$554	\$632

* State/territory values not reported if dataset includes less than five surgeons

Why is there such variation in the average out of pocket charge?

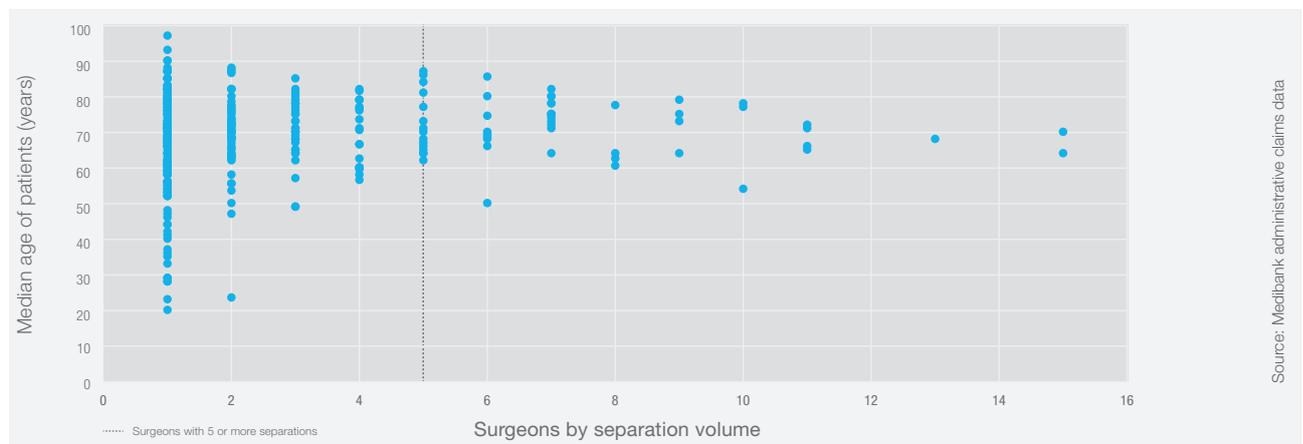
Bowel resection procedures

In 2014 Medibank funded 833 operations in private hospitals where bowel resection was recorded as the principal procedure (highest value MBS fee from the medical claim) for the hospital admission. The analysis is limited to those 833 procedures. 305 surgeons (identified through the stem of their Medicare provider number) billed Medibank for those 833 procedures. 56 (18%) of these surgeons billed Medibank for five or more procedures. Surgeon-level analysis of the indicators considered for this procedure has been limited to those surgeons with five or more patient separations, so that each surgeon has a sufficient sample of separations from which a value (e.g. an average, median or percentage) for an indicator can be reported.

Table 29: MBS code included in this analysis

Procedure	MBS Codes	Volume of separations	Percentage of separations	Definition
Bowel resection procedures	32003	833	57%	Large intestine, resection of, with anastomosis, including right hemicolectomy

Figure 44: Median age of patients



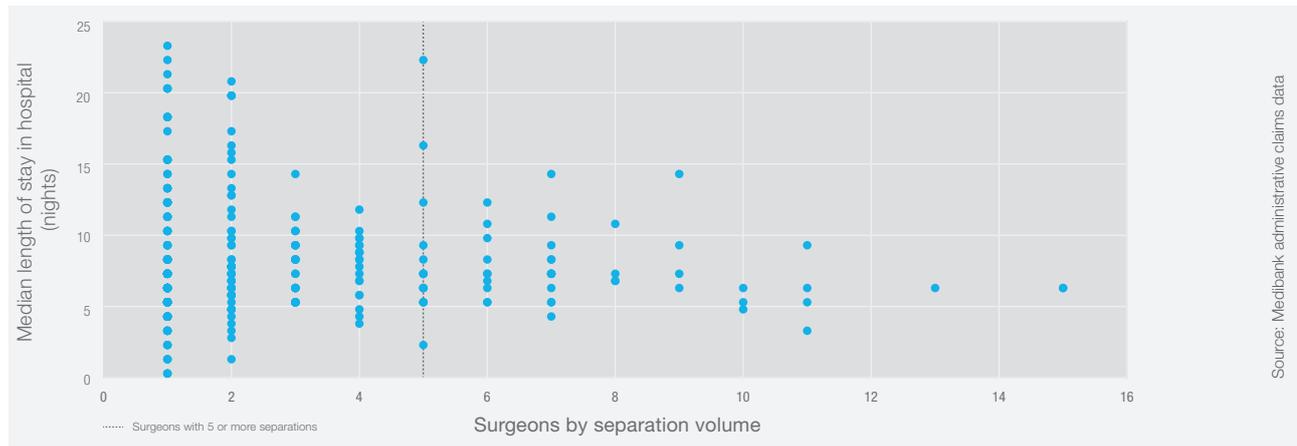
Across all separations the median patient age was 65 years.

For the 56 surgeons who performed at least five procedures:

- The median age of a surgeon’s patients ranged between 49 years and 86 years.

Is this variation in age clinically expected?

Figure 45: Median length of stay in hospital (nights)



Source: Medibank administrative claims data

For the 56 surgeons who performed at least five procedures:

- The median number of nights that a surgeon’s patients stayed in hospital ranged between 2 nights and 22 nights with a median of 7 nights.

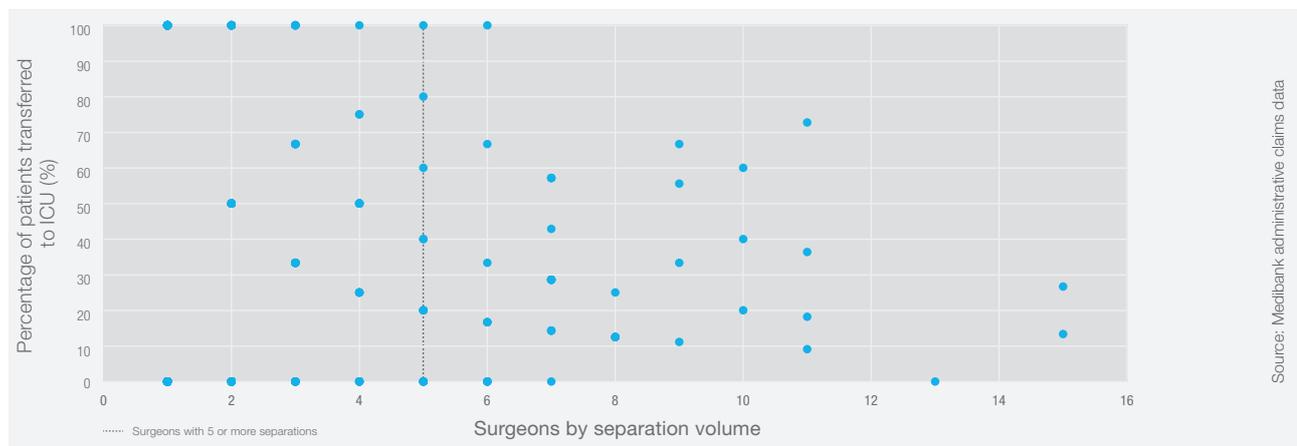
Table 30: Median length of stay (nights) by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Length of stay	NA*	7	NA*	6	8	7	8	6

* State/territory values not reported if dataset includes less than five surgeons

What would you consider the most effective length of stay for this procedure?

Figure 46: Percentage of patients transferred to ICU



Source: Medibank administrative claims data

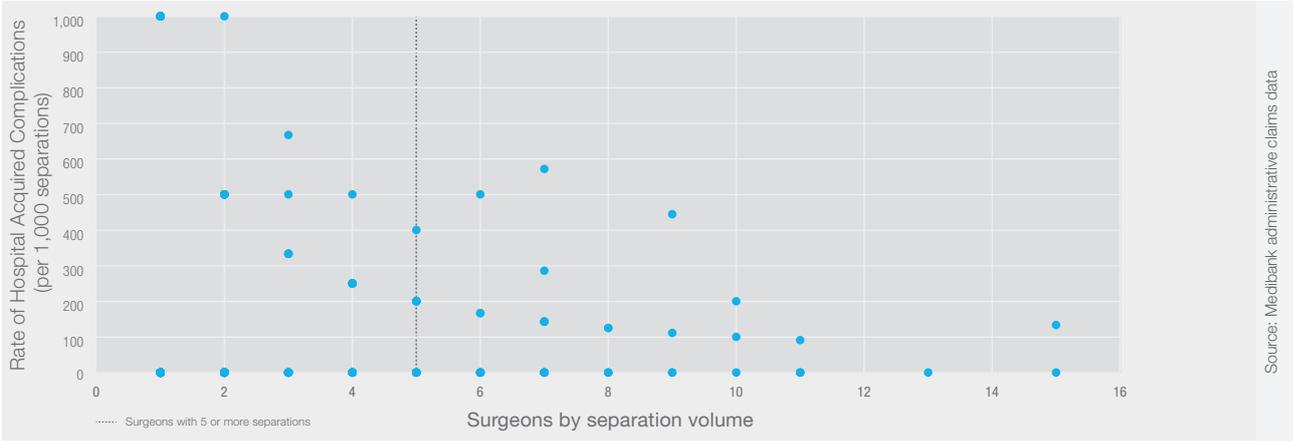
Patients were transferred to an intensive care unit (ICU) during 202 (24%) hospital separations. Administrative claims data does not indicate whether the transfers were planned or unplanned.

For the 56 surgeons who performed at least five procedures:

- 38 (68%) surgeons had one or more separations during which patients were transferred to ICU
- The percentage of a surgeon’s patients that were transferred to ICU ranged between 0% and 100% with a median of 14%.

Given that ICU transfers could indicate a difficult post-operative recovery, what would be the expected transfer rate?

Figure 47: Rate of Hospital Acquired Complications (per 1,000 separations)



Hospital Acquired Complications are a Medibank subset of 82 International Classification of Diseases (ICD) codes drawn from the Australian Commission of Safety and Quality in Health Care’s list of high priority complications (see Table 55).

The rate of Hospital Acquired Complications was 90 per 1,000 hospital separations.

For the 56 surgeons who performed at least five procedures:

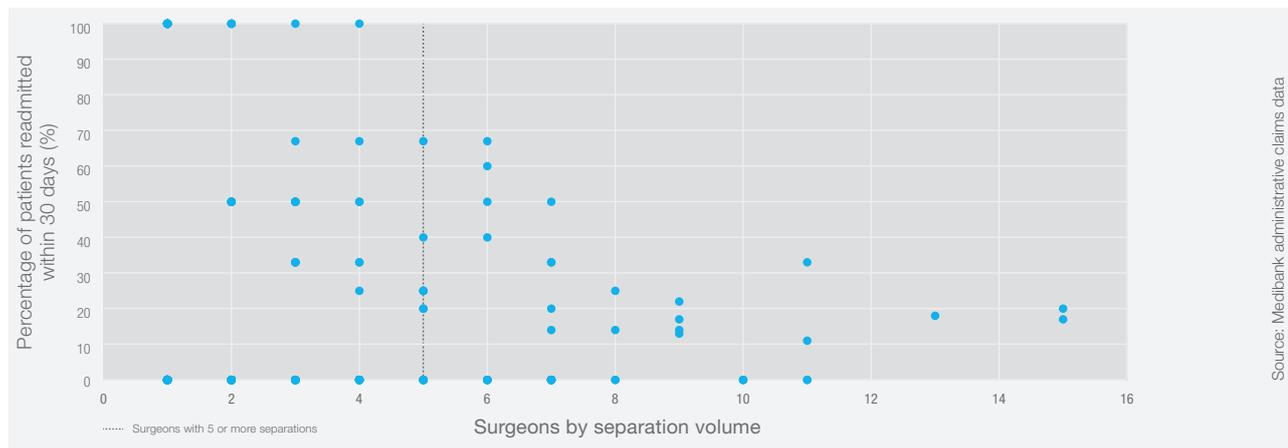
- 23 (41%) surgeons had one or more separations during which at least one Hospital Acquired Complication was identified
- The rate of Hospital Acquired Complications for a surgeon ranged between 0 per 1,000 separations to 571 per 1,000 separations, with a median of 0 per 1,000 separations.

Table 31: Hospital Acquired Complications identified during the hospital separation

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	34	50	0	84

What complications have you had for this procedure?

Figure 48: Percentage of patients readmitted within 30 days



Following 95 (14.8%) of separations, patients were readmitted (for all causes)* to a hospital within 30 days. Administrative claims data does not indicate whether the readmissions were planned or unplanned. For the 95 separations followed by a readmission:

- 78 readmissions were to a private hospital (the same one or a different hospital). In 17 of these separations one or more Hospital Acquired Complications were identified (a total of 19 Hospital Acquired Complications recorded in 17 readmissions, see Table 32).
- 17 readmissions were to a public hospital (where the patient was treated as a private patient).

For the 56 surgeons who performed at least five procedures, the percentage of a surgeon's patients readmitted within 30 days ranged between 0% and 67% with a median of 0%.

Readmissions to public hospitals, where patients were treated as public patients, are not captured in these datasets.

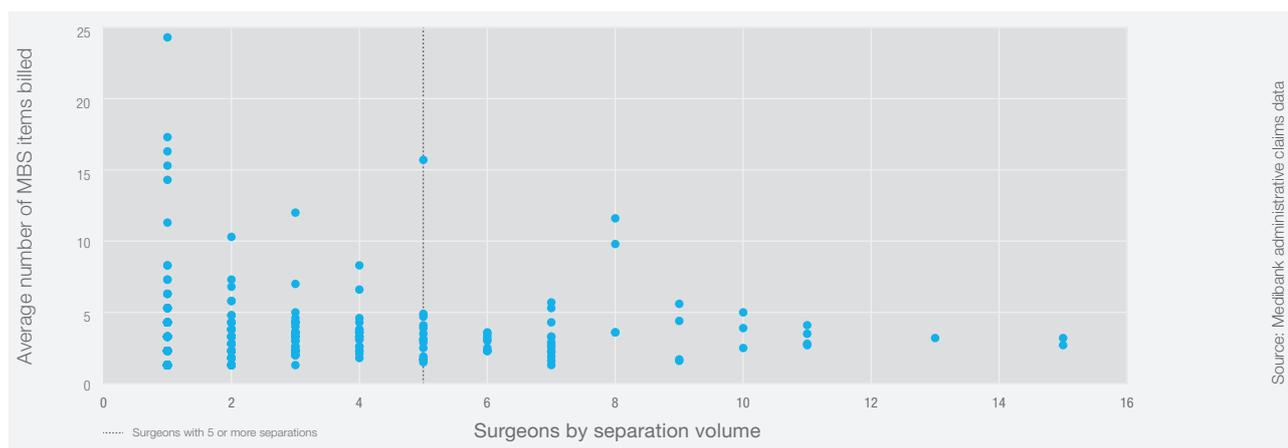
* Readmissions for rehabilitation, psychiatric treatment, dialysis and chemotherapy were excluded where identified. Separations involving a patient 80 years or older were also excluded.

Table 32: Hospital Acquired Complications identified on readmission

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	14	5	0	19

What are the reasons for readmission for this procedure, and what is the expected rate?

Figure 49: Average number of MBS items billed

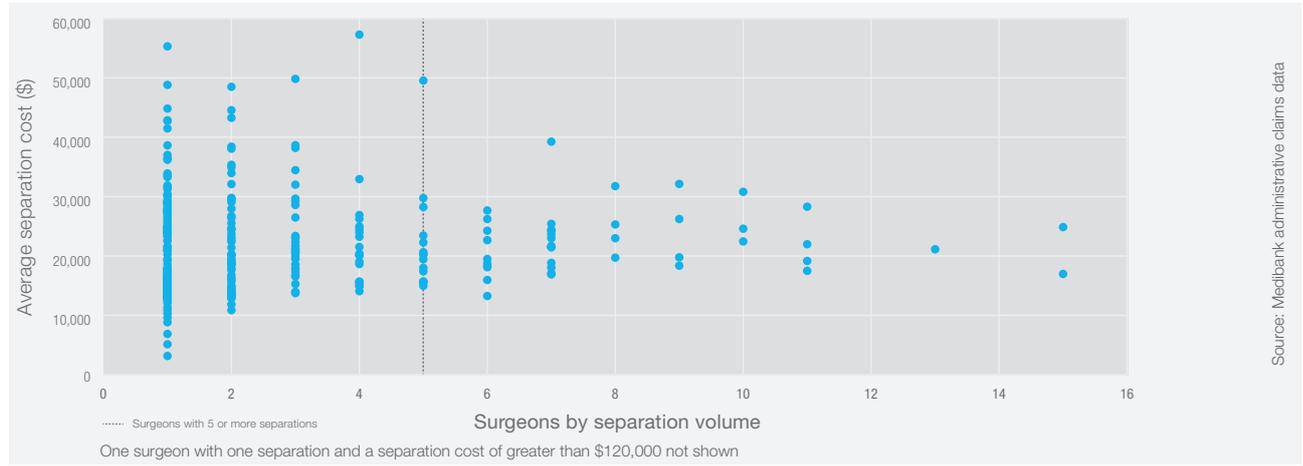


For the 833 separations, the average number of MBS items billed by a surgeon (the principal surgeon only) was 3.2 per separation.

Of the 56 surgeons who performed five or more procedures, the average number of MBS items billed by a surgeon ranged between 1 and 15.4 with a median 2.8.

What are the reasons for the wide variation in the number of MBS items billed?

Figure 50: Average separation cost



The separation cost includes the total charges for the hospital separation, including payments made by Medibank, Medicare and the patient. Costs include hospital, prostheses, medical practitioners and diagnostic services. The average total cost per hospital separation was \$22,419.

For the 56 surgeons who performed at least five procedures, the average separation cost of a surgeon ranged between \$13,266 and \$49,546 with a median of \$21,501.

Table 33: Average separation cost by State/territory

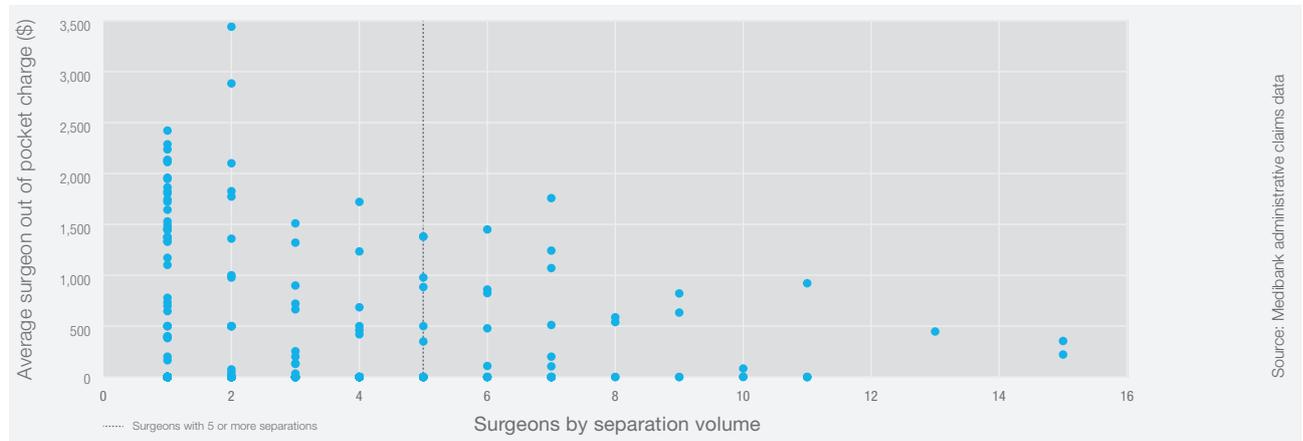
State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Average separation cost	NA*	\$21,798	NA*	\$21,537	\$20,064	\$20,838	\$25,666	\$20,242

* State/territory values not reported if dataset includes less than five surgeons

Are you aware of the associated costs for this procedure such as pathology, diagnostic imaging, surgical assistants, anaesthetists, hospital bed fees?

What are the reasons for variation in separation costs?

Figure 51: Average surgeon out of pocket charge



Patients were charged an out of pocket fee by the surgeon in 28% of hospital separations and the average out of pocket charged was \$1,107.

For the 56 surgeons who performed at least five procedures, 29 (52%) did not charge any of their patients an out of pocket for the hospital admission. The average out of pocket charge of a surgeon ranged from \$0 (no out of pocket charge) to a maximum of \$1,758, with a median of \$0.

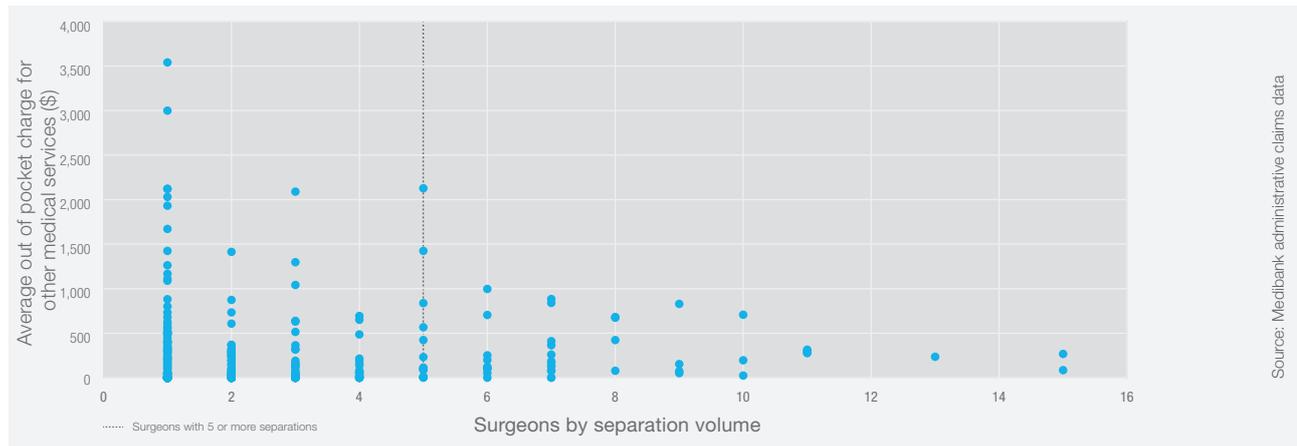
Table 34: Surgeon out of pocket charges by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	NA*	39%	NA*	33%	6%	59%	17%	25%
Average OOP	NA*	\$1,530	NA*	\$1,087	\$295	\$785	\$864	\$861

* State/territory values not reported if dataset includes less than five surgeons

Why is there such variation in the average out of pocket charge?

Figure 52: Average out of pocket charge for other medical services



Source: Medibank administrative claims data

Patients were charged an out of pocket fee for other medical services (including charges raised by the anaesthetist, assistant surgeon and for diagnostics) in 89% of separations and the average charge was \$300. For the 56 surgeons who performed at least five procedures, the average out of pocket charges received by a surgeon’s patients for other medical services ranged between \$0 and \$2,127 with a median of \$177.

Table 35: Out of pocket charges for other medical services by state

	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	NA*	82%	NA*	94%	98%	91%	86%	90%
Average OOP	NA*	\$427	NA*	\$346	\$72	\$154	\$192	\$382

* State/territory values not reported if dataset includes less than five surgeons

Why is there such variation in the average out of pocket charge?

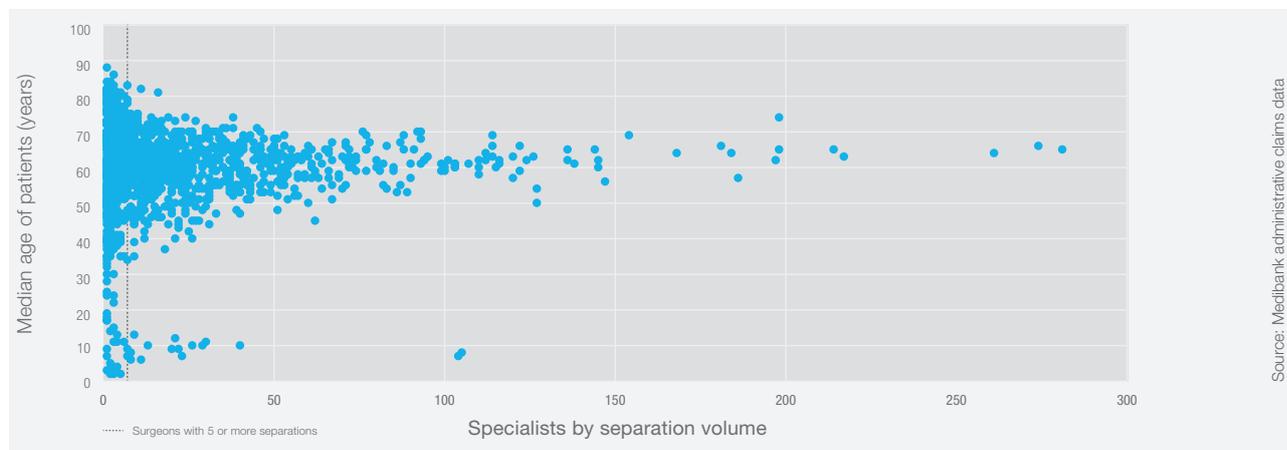
Gastroscopy

In 2014 Medibank funded 24,629 operations in private hospitals where a gastroscopy was recorded as the principal procedure (highest value MBS fee from the medical claim) for the hospital admission. The analysis is limited to those 24,629 procedures. 1,214 specialists (identified through the stem of their Medicare provider number) billed Medibank for those procedures. This information does not indicate whether the specialist was a surgeon or physician. 836 (69%) of these specialists billed Medibank for five or more procedures in 2014. Specialist-level analysis of the indicators considered for this procedure has been limited to those specialists with five or more patient separations, so that each specialist has a sufficient sample of separations from which a value (e.g. an average, median or percentage) for an indicator can be reported.

Table 36: MBS codes included in this analysis

Procedure	MBS Codes	Volume of separations	Percentage of separations	Definition
Gastroscopy	30473	24,629	100%	Oesophagoscopy (not being a service to which item 41816 or 41822 applies), gastroscopy, duodenoscopy or panendoscopy (1 or more such procedures), with or without biopsy, not being a service associated with a service to which item 30476 or 30478 applies

Figure 53: Median age of patients



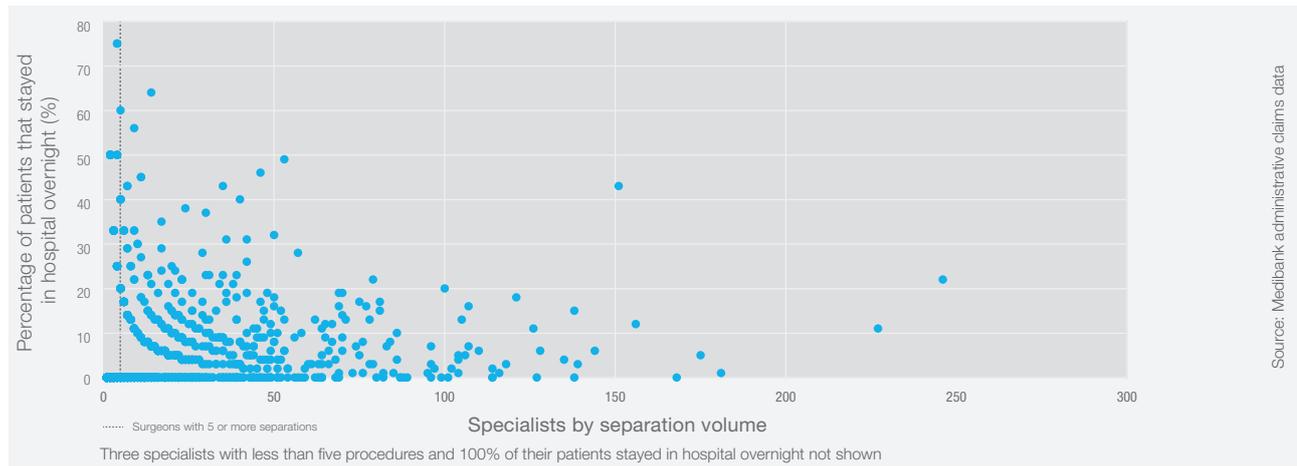
Across all separations the median age of these patients was 58 years.

For the 836 specialists who performed at least five procedures:

- The median age of each specialist's patients was between 2 years and 81 years.

Is this variation in age clinically expected?

Figure 54: Percentage of patients that stayed in hospital overnight



In 6.6% of hospital separations patients stayed in hospital for at least one night. The median age of patients that stayed in hospital overnight was 72 years, compared with a median age of 59 years for patients admitted and discharged on the same day.

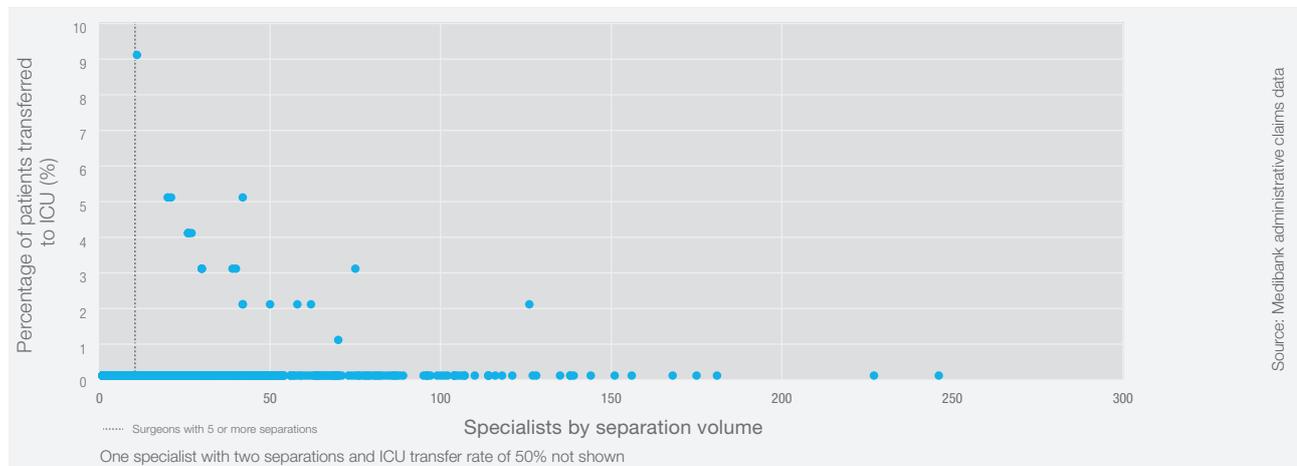
For the 836 specialists who performed at least five procedures:

- 424 (51%) had all of their patients discharged on the same day of admission
- 412 (49%) had a mix of patients that either stayed in hospital overnight or were admitted and discharged on the same day
- The percentage of a specialist's patients that stayed in hospital overnight ranged between 0% and 64% with a median of 0%.

What are the reasons for a patient staying in hospital overnight following this procedure?

Why is there variation in the rate of patients that stay in hospital overnight between specialists?

Figure 55: Percentage of patients transferred to ICU



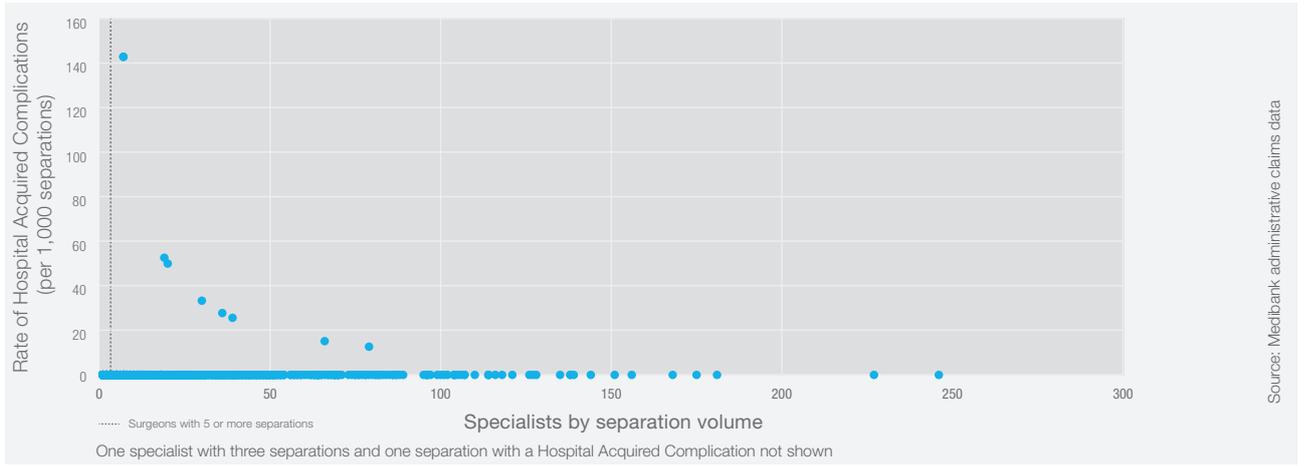
For the total sample of 24,629 hospital separations, patients were transferred to an intensive care unit (ICU) during 26 (0.11%) hospital separations. Administrative claims data does not indicate whether the transfers were planned or unplanned.

For the 836 specialists who performed at least five procedures:

- 22 (2.6%) specialists had one or more separations during which the patients were transferred to ICU.
- The percentage of a specialist's patients that were transferred to ICU ranged between 0% and 9% with a median of 0%.

Given that ICU transfers could indicate a difficult post-operative recovery, what would be the expected transfer rate?

Figure 56: Rate of Hospital Acquired Complications (per 1,000 separations)



Hospital Acquired Complications are a Medibank subset of 82 International Classification of Diseases (ICD) codes drawn from the Australian Commission of Safety and Quality in Health Care's list of high priority complications (see Table 55).

For the 24,629 hospital separations, the rate of Hospital Acquired Complications was 0.4 per 1,000 separations.

For the 836 specialists who performed at least five procedures:

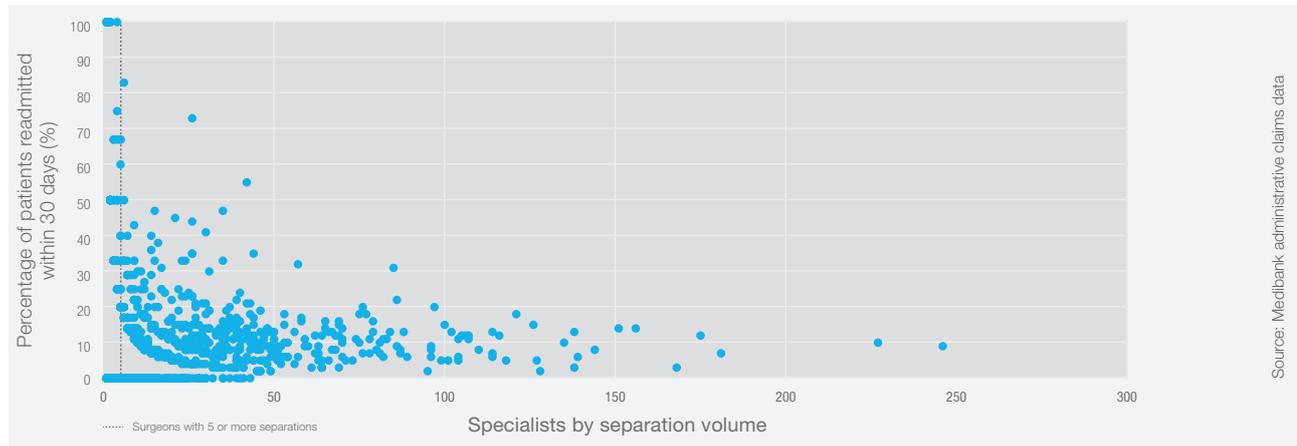
- 9 (1%) specialists had one or more patient separations during which at least one Hospital Acquired Complication was identified
- The rate of Hospital Acquired Complications for a specialist ranged between 0 per 1,000 separations to 143 per 1,000 separations with a median of 0 per 1,000 separations.

Table 37: Hospital Acquired Complications identified during the hospital separation

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	1	4	5	0	10

What complications have you had for this procedure?

Figure 57: Percentage of patients readmitted within 30 days



Following 2,204 (9.8%) separations patients were readmitted (for all causes)* to a hospital within 30 days. Administrative claims data does not indicate whether the readmissions were planned or unplanned. The median age of patients readmitted was 62 years, compared with a median age of 57 years for patients not readmitted. Of the 2,204 separations followed by a readmission:

- 1,929 readmissions were to a private hospital (the same one or a different hospital). In 17 of these separations a Hospital Acquired Complication was identified (see Table 38)
- 275 readmissions were to a public hospital (where the patient was treated as a private patient).

For the 836 specialists who performed at least five procedures, the percentage of a specialist's patients readmitted within 30 days ranged between 0% and 83% with a median of 8%.

Readmissions to public hospitals, where patients were treated as public patients, are not captured in these datasets.

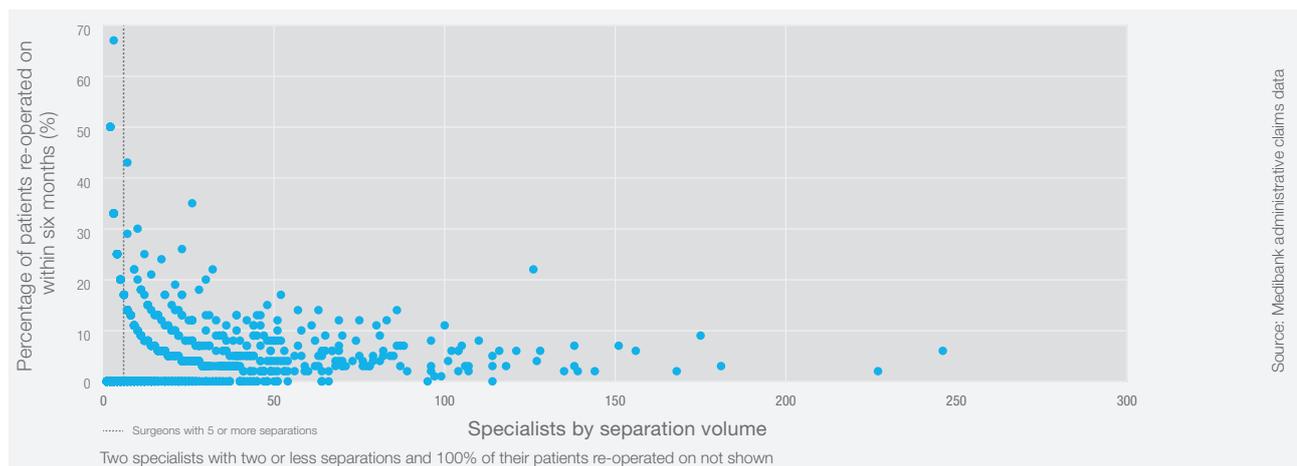
* Readmissions for rehabilitation, psychiatric treatment, dialysis and chemotherapy were excluded where identified. Separations involving a patient 80 years or older were also excluded.

Table 38: Hospital Acquired Complications identified on readmission

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	11	6	0	17

What are the reasons for readmission for this procedure, and what is the expected rate?

Figure 58: Percentage of patients re-operated on within six months



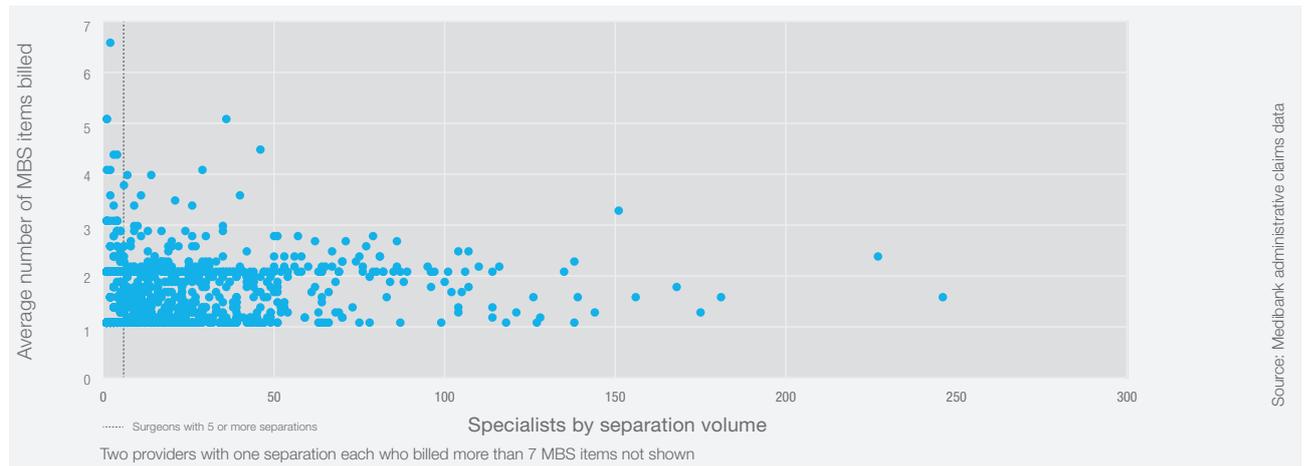
Patients were re-operated on (same procedure) within six months of discharge from hospital following 4.7% of hospital separations. The median age of patients re-operated on was 65 years compared with a median age of 60 years for those patients not re-operated on.

Of the 836 specialists who performed five or more procedures:

- 451 (54%) had one or more patients that were re-operated on within six months
- The percentage of a specialist's patients re-operated on within six months ranged between 0% and 43% with a median of 2%.

What are the reasons for re-operation for this procedure, and what is the expected rate?

Figure 59: Average number of MBS items billed

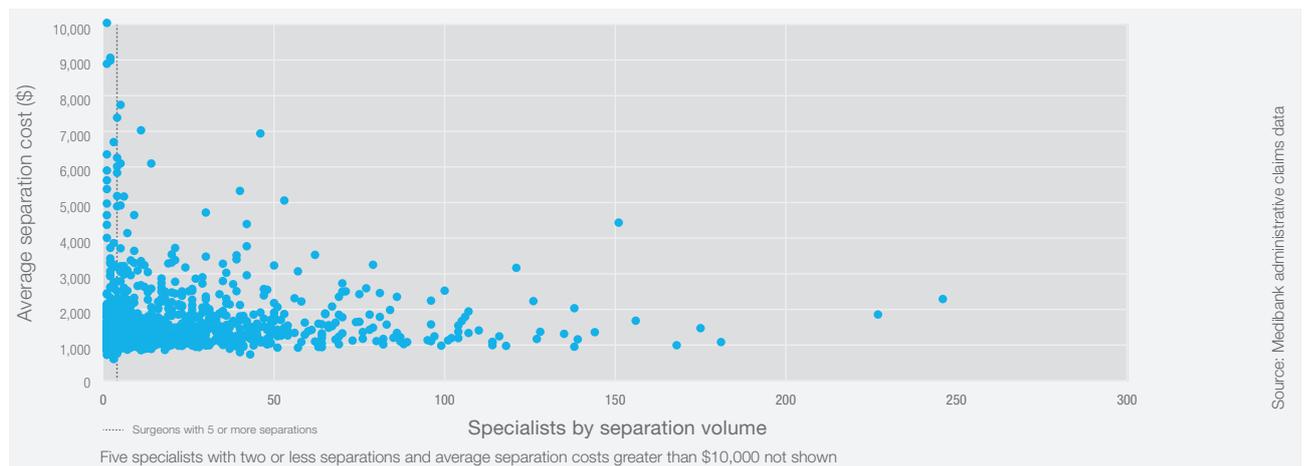


The average number of MBS items billed by the specialist (the principal specialist only) was 1.6 per hospital separation.

For the 836 specialists who performed five or more procedures, the average number of MBS items billed by a specialist ranged between 1 and 5 with a median of 1.5.

What are the reasons for the wide variation in the number of MBS items billed?

Figure 60: Average separation cost



The separation cost includes the total charges for the hospital separation, including payments made by Medibank, Medicare and the patient. Costs include hospital, prostheses, medical practitioners and diagnostic services. For the hospital separations in this sample the average separation cost was \$1,678.

For the 836 specialists who performed at least five procedures, the average separation cost of a specialist ranged between \$809 and \$7,815 with a median of \$1,400.

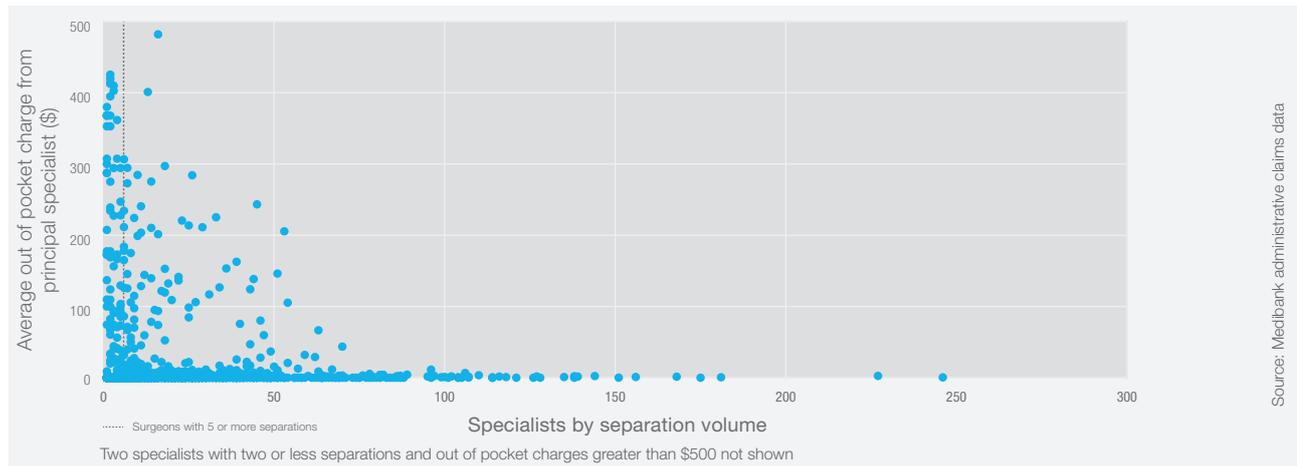
Table 39: Average separation cost by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Average separation cost	\$1,404	\$1,497	\$1,644	\$1,840	\$1,329	\$1,625	\$1,662	\$1,833

Are you aware of the associated costs for this procedure such as pathology, diagnostic imaging, assistants, anaesthetists, hospital bed fees?

What are the reasons for variation in separation costs?

Figure 61: Average principal specialist out of pocket charge



Patients were charged an out of pocket fee by the principal specialist in 7% of separations and the average out of pocket charge was \$174.

Of the 836 specialists who performed at least five procedures, 540 (64.6%) did not charge any of their patients an out of pocket charge for the hospital admission. The average out of pocket charge for a principal specialist ranged from \$0 (no out of pocket charge) to a maximum of \$482, with a median of \$0.

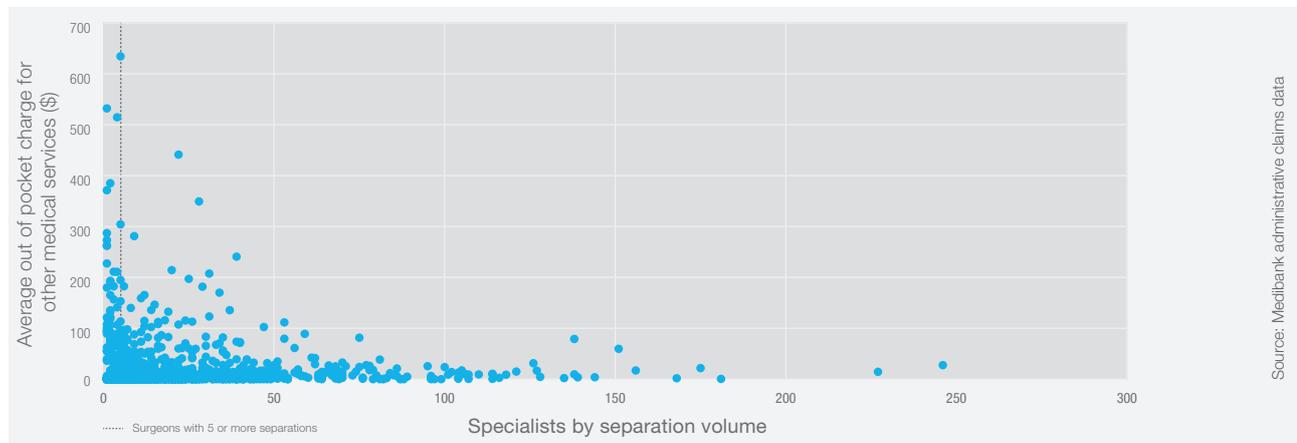
Table 40: Principal specialist out of pocket charges by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	58%	12%	26%	6%	1%	2%	4%	4%
Average OOP	\$188	\$206	\$325	\$166	\$89	\$105	\$112	\$143

* Regional values included where dataset includes five or more surgeons to protect anonymity

Why is there such variation in the average out of pocket charge?

Figure 62: Average out of pocket charge for other medical services



Patients were charged an out of pocket fee for other medical services (including charges raised by the anaesthetist, assistant specialist surgeon and for diagnostics) in 25% of separations and the average out of pocket charge was \$70.

For the 836 specialists who performed at least five procedures, the average out of pocket charges received by a specialist's patients for other medical services ranged between \$0 and \$634 with a median of \$5.

Table 41: Out of pocket charges for other medical services by state/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	3%	21%	74%	28%	20%	13%	26%	27%
Average OOP	\$123	\$69	\$120	\$67	\$24	\$17	\$61	\$120

Why is there such variation in the average out of pocket charge?

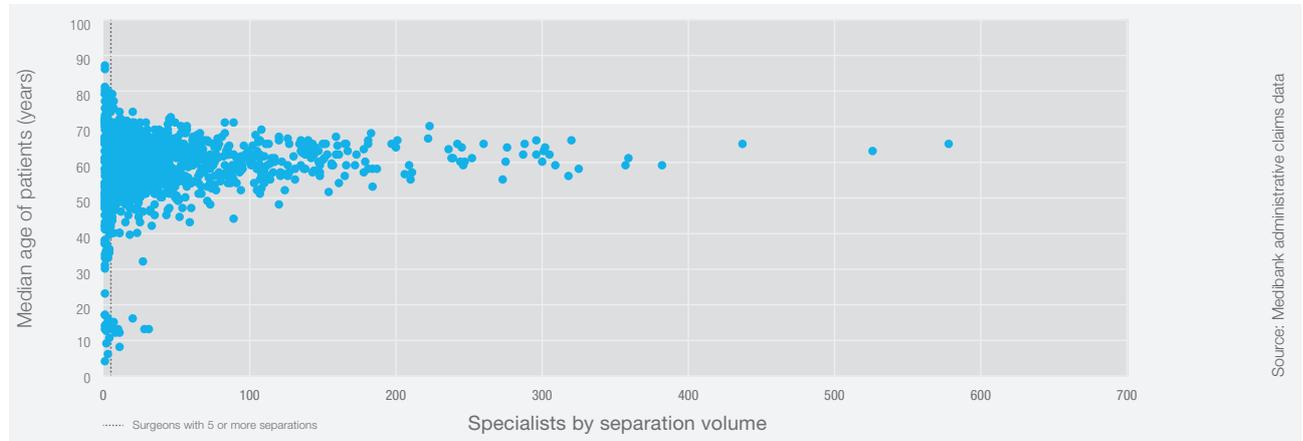
Colonoscopy

In 2014 Medibank funded 58,271 operations in private hospitals where colonoscopy was recorded as the principal procedure (highest value MBS fee from the medical claim) for the hospital admission. The analysis is limited to those 58,271 procedures. 1,307 specialists (identified through the stem of their Medicare provider number) billed Medibank for those procedures. This information does not indicate whether the specialist was a surgeon or physician. 1,103 (84%) of these specialists undertook five or more procedures. Specialist-level analysis of the indicators considered for this procedure has been limited to those specialists with five or more patient separations so that each specialist has a sufficient sample of separations from which a value (e.g. an average, median or percentage) for an indicator can be reported.

Table 42: MBS codes included in this analysis

Procedure	MBS Codes	Volume of separations	Percentage of separations	Definition
Colonoscopy	32090	58,271	100%	Fibreoptic colonoscopy examination of colon beyond the hepatic flexure with or without biopsy

Figure 63: Median age of patients



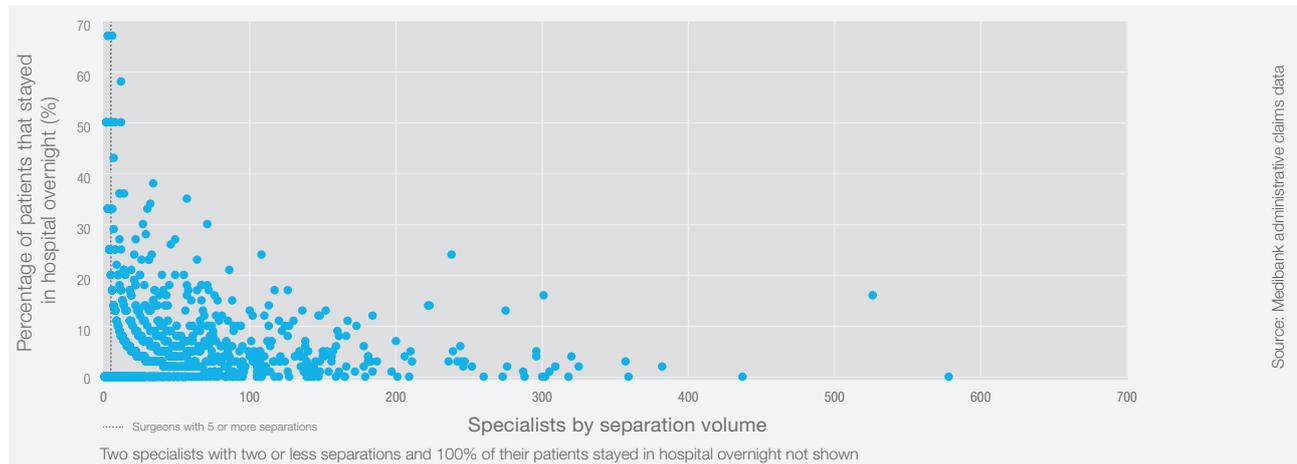
Across all separations the median patient age was 59 years.

For the 1,103 specialists who performed at least five procedures:

- The median age of each specialist's patients ranged between 7 years and 78 years.

Is this variation in age clinically expected?

Figure 64: Percentage of patients that stayed in hospital overnight



In 4.7% of the hospital separations patient stayed in hospital for at least one night. The median age of patients that stayed in hospital overnight was 74 years, compared with a median age of 59 years for those patients admitted and discharged on the same day.

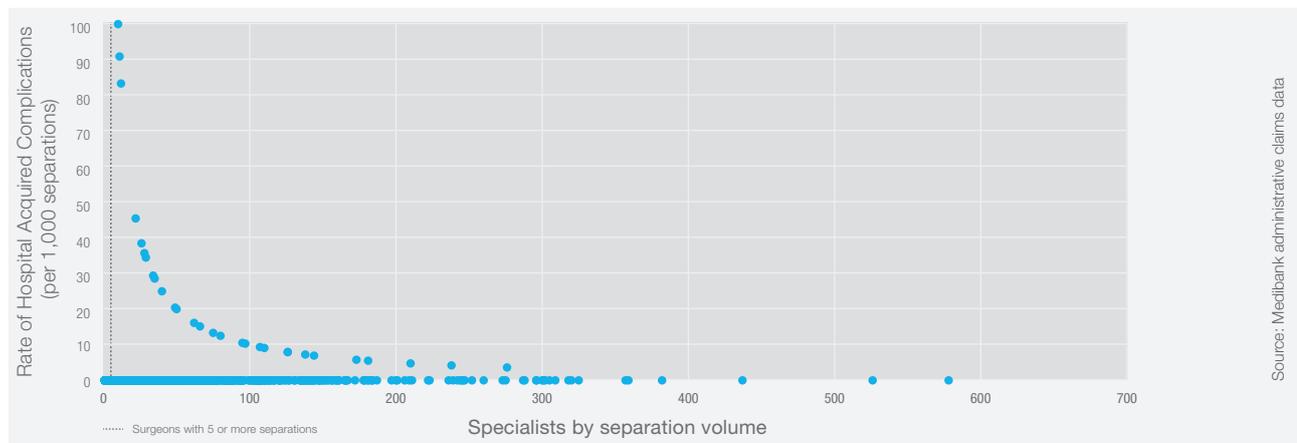
For the 1,103 specialists who performed at least five procedures:

- 438 (40%) had all of their patients were discharged on the same day of admission
- 665 (60%) had a mix of patients that either stayed in hospital overnight or were admitted and discharged on the same day
- The percentage of a specialist’s patients that stayed in hospital overnight ranged between 0% and 67% with a median of 3%.

What are the reasons for a patient staying in hospital overnight following this procedure?

Why is there variation in the rate of patients that stay in hospital overnight between specialists?

Figure 65: Rate of Hospital Acquired Complications (per 1,000 separations)



Hospital Acquired Complications are a Medibank subset of 82 International Classification of Diseases (ICD) codes drawn from the Australian Commission of Safety and Quality in Health Care’s list of high priority complications (see Table 55).

The rate of Hospital Acquired Complications was less than 1 (0.5) per 1,000 separations.

For the 1,103 specialists who performed at least five procedures:

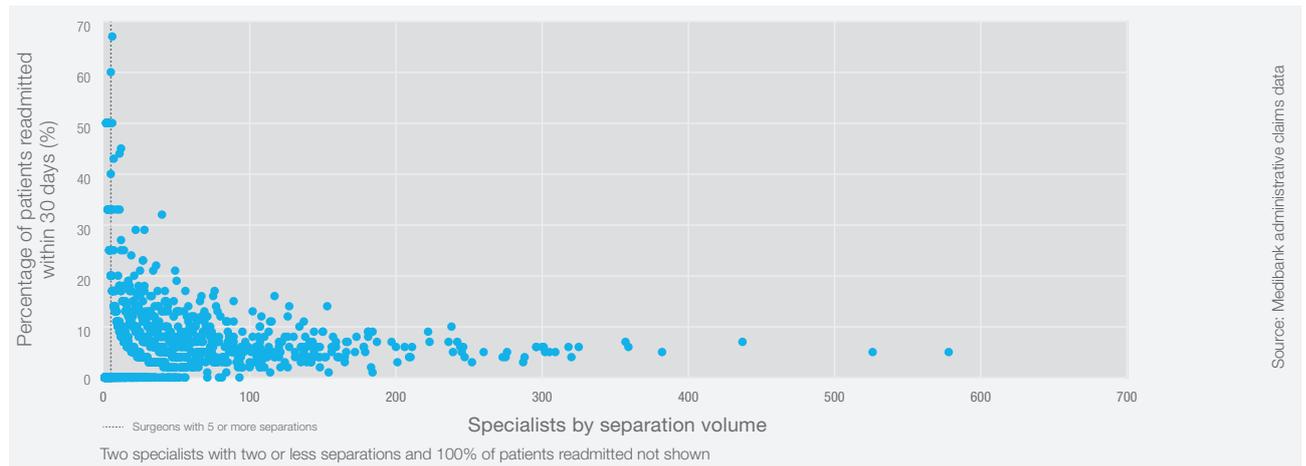
- 29 (2.6%) specialists had one separation during which at least one Hospital Acquired Complication was identified
- The rate of Hospital Acquired Complications for a specialist ranged between 0 per 1,000 separations to 100 per 1,000 separations with a median of 0 per 1,000 separations.

Table 43: Hospital Acquired Complications identified during the hospital separation

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	8	22	0	30

What complications have you had for this procedure?

Figure 66: Percentage of patients readmitted within 30 days



In 3,275 (5.9%) of hospital separations patients were readmitted (for all causes)* to a hospital within 30 days. Administrative claims data does not indicate whether the readmissions were planned or unplanned. The median age of patients readmitted was 62 years, compared with a median age of 59 years for those patients not readmitted. Of the 3,275 separations followed by a readmission:

- 2,852 readmissions were to a private hospital (the same one or a different one). In 42 of these separations at least one Hospital Acquired Complication was identified a total of 45 Hospital Acquired Complications in 42 separations, see Table 44)
- 423 readmissions were to a public hospital (where the patient was treated as a private patient).

For the 1,103 specialists who performed at least five procedures, the percentage of a specialist's patients readmitted within 30 days ranged between 0% and 67% with a median of 5%.

Readmissions to public hospitals, where patients were treated as public patients, are not captured in these datasets.

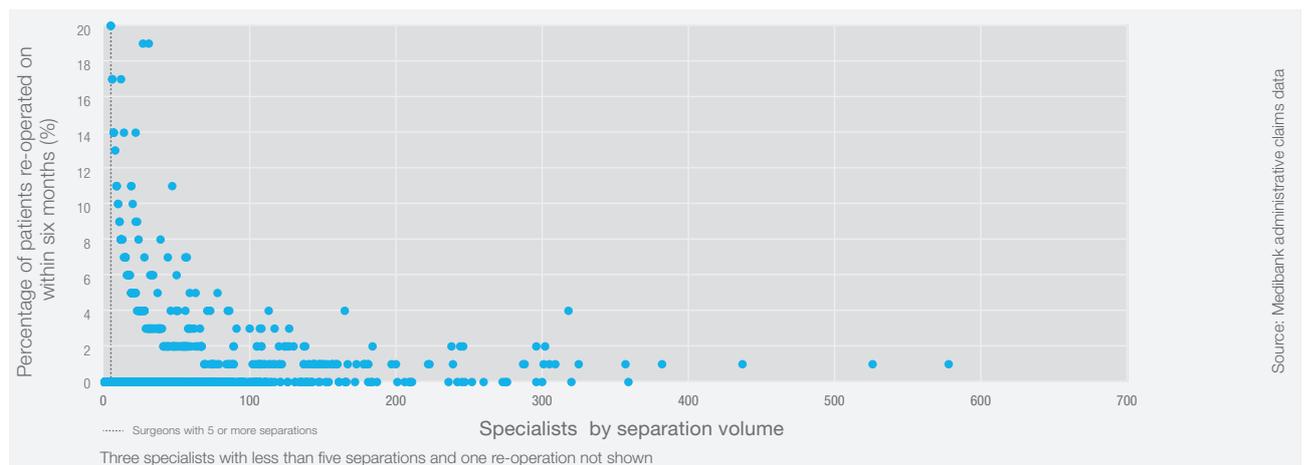
* Readmissions for rehabilitation, psychiatric treatment, dialysis and chemotherapy were excluded where identified. Separations involving a patient 80 years or older were also excluded.

Table 44: Hospital Acquired Complications identified on readmission

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	21	24	0	45

What are the reasons for readmission for this procedure, and what is the expected rate?

Figure 67: Percentage of patients re-operated on within six months



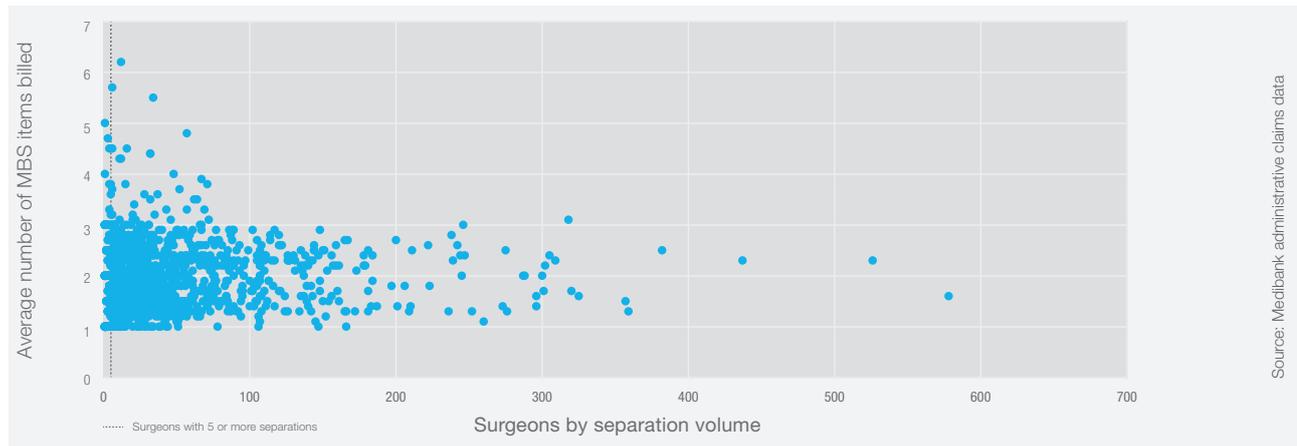
Patients were re-operated on (same procedure) within six months of discharge from hospital, in 0.8% of separations. There was no difference in the median age of patients re-operated on and those not re-operated on (60 years).

Of the 1,103 specialists who performed five or more procedures:

- 280 (25%) had one or more patients that were re-operated on within six months
- The percentage of a specialist's patients that were re-operated on ranged between 0% and 20% with a median of 0%.

What are the reasons for re-operation for this procedure, and what is the expected rate?

Figure 68: Average number of MBS items billed

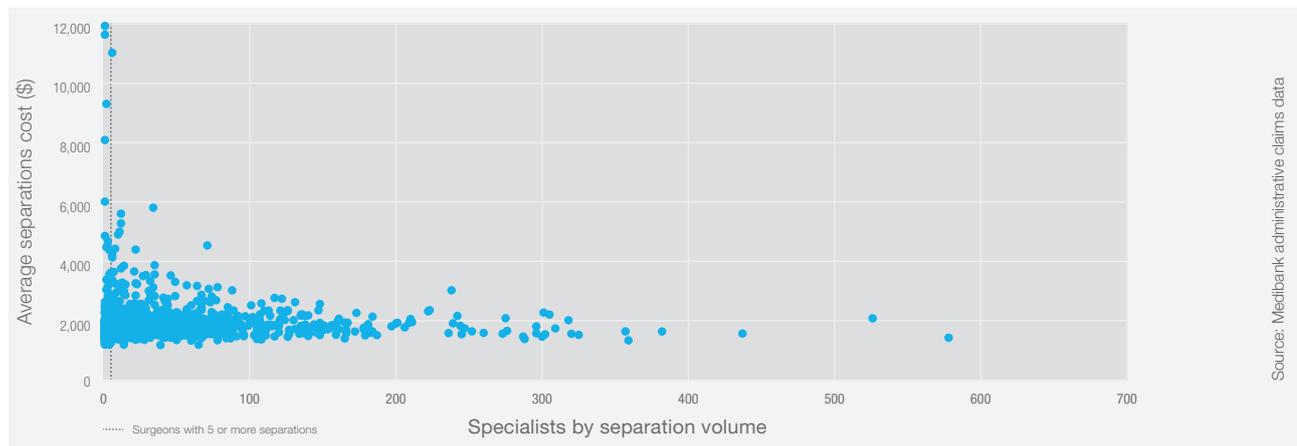


The average number of MBS items billed by the specialist (the principal specialist only) was 2 per hospital separation.

Of the 1,103 specialists who performed five or more procedures, the average number of MBS items billed by a specialist ranged between 1 and 6.2 with a median 1.9.

What are the reasons for the wide variation in the number of MBS items billed?

Figure 69: Average separation cost



The separation cost includes the total charges for the hospital separation, including payments made by Medibank, Medicare and the patient. Costs include hospital, prostheses, medical practitioners and diagnostic services. The average separation cost was \$1,845.

For the 1,103 specialists who performed at least five procedures, the average separation cost of a specialist ranged between \$1,144 and \$10,990 with a median of \$1,796.

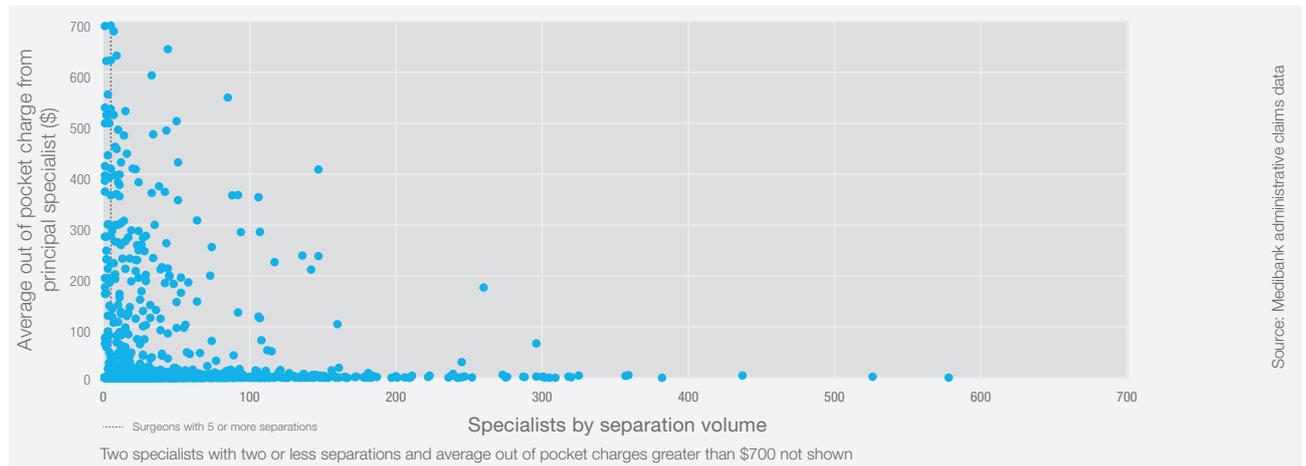
Table 45: Average separation cost by state/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Average separation cost	\$1,761	\$1,863	\$1,756	\$1,923	\$1,665	\$1,744	\$1,807	\$1,883

Are you aware of the associated costs for this procedure such as pathology, diagnostic imaging, assistants, anaesthetics, hospital bed fees?

What are the reasons for variation in separation costs?

Figure 70: Average principal specialist out of pocket charge



Patients were charged an out of pocket fee by the principal specialist in 9.3% of separations and the average charge was \$271.

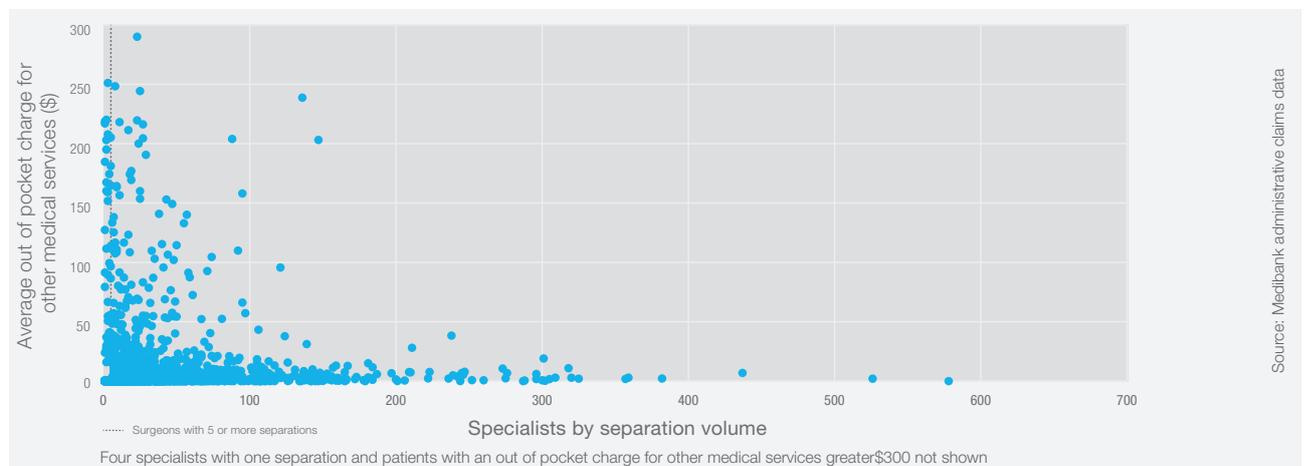
For the 1,103 specialists who performed at least five procedures, 567 (51%) did not charge any of their patients an out of pocket for the hospital admission. The average out of pocket charged ranged from \$0 (no out of pocket charge) to a maximum of \$692 with a median of \$0.

Table 4: Principal specialist out of pocket charges by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	65%	15%	29%	9%	2%	1%	6%	4%
Average OOP	\$339	\$339	\$560	\$244	\$136	\$123	\$136	\$162

Why is there such variation in the average out of pocket charge?

Figure 71: Average out of pocket charge for other medical services



Patients were charged an out of pocket fee for other medical services (including charges raised by the anaesthetist, assistant specialist and for diagnostics) in 17% of separations and the average charge was \$71.

For the 1,103 specialists who performed at least five procedures, the average out of pocket charges received by their patients for other medical services ranged between \$0 and \$290 with a median of \$3.

Table 47: Out of pocket charges for other medical services by state

Region	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	6%	18%	68%	18%	11%	8%	16%	17%
Average OOP	\$175	\$79	\$135	\$89	\$34	\$18	\$44	\$86

Why is there such variation in the average out of pocket charge?

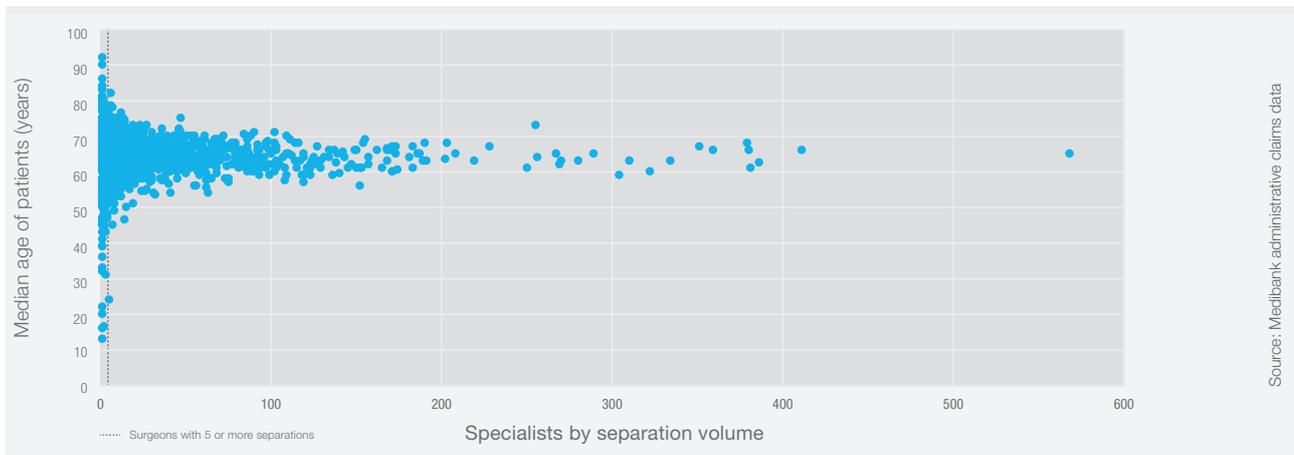
Colonoscopy (with polyp removal)

In 2014 Medibank funded 45,301 operations in private hospitals where colonoscopy (with polyp removal) was recorded as the principal procedure (highest value MBS fee from the medical claim) for the hospital admission. The analysis is limited to those 45,301 procedures. 1,224 specialists (identified through the stem of their Medicare provider number) billed Medibank for those procedures. This information does not indicate whether the specialist was a surgeon or physician. 962 (79%) of these specialists undertook five or more procedures. Specialist-level analysis of the indicators considered for this procedure has been limited to those specialists with five or more patient separations, so that each specialist has a sufficient sample of separations from which a value (e.g. an average, median or percentage) for an indicator can be reported.

Table 48: MBS codes included in this analysis

Procedure	MBS Codes	Volume of separations	Percentage of separations	Definition
Colonoscopy (with polyp removal)	32093	45,301	100%	Endoscopic examination of the colon beyond the hepatic flexure by fiberoptic colonoscopy for the removal of 1 or more polyps, or the treatment of radiation proctitis, angiodysplasia or post-polypectomy bleeding by argon plasma coagulation, 1 or more of

Figure 72: Median age of patients



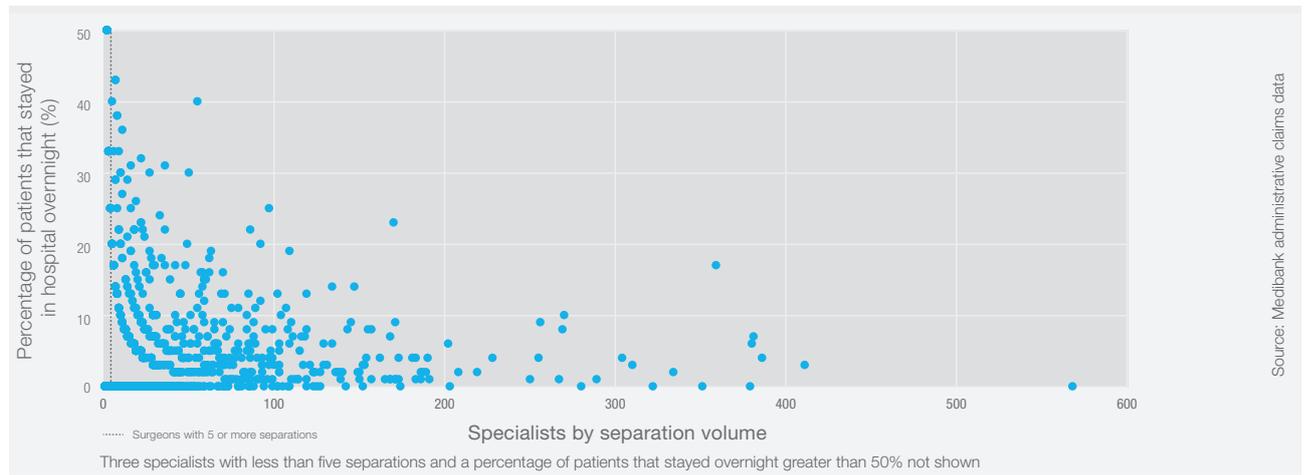
Across all separations the median patient age was 62 years.

For the 962 specialists who performed at least five procedures:

- The median age of each specialist’s patients ranged between 23 years and 81 years.

Is this variation in age clinically expected?

Figure 73: Percentage of patients that stayed in hospital overnight



In 4.5% of the hospital separations the patient stayed in hospital for at least one night. The median age of patients that stayed in hospital overnight was 74 years, compared with a median age of 63 years for those patients admitted and discharged on the same day.

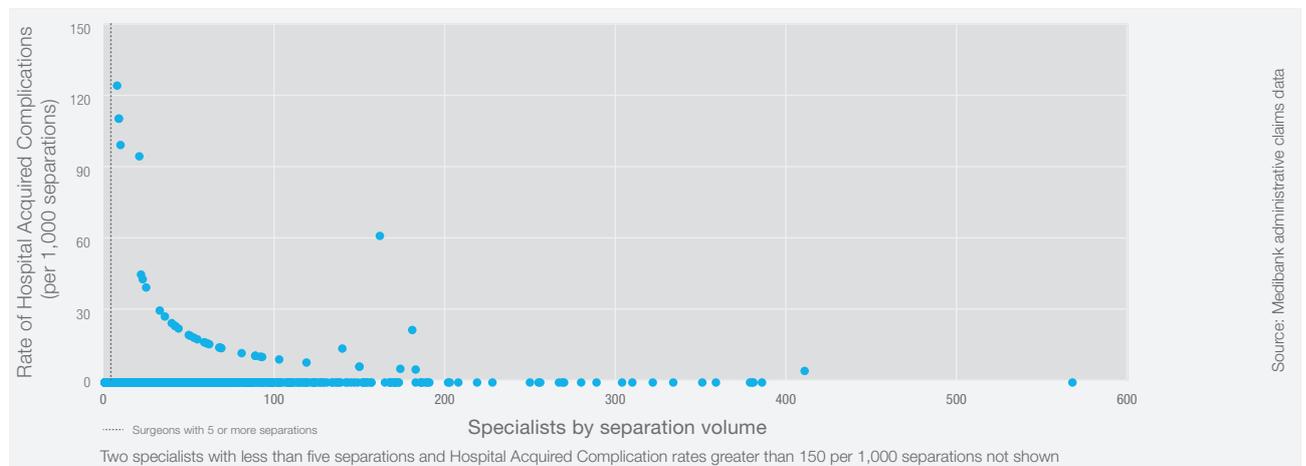
For the 962 specialists who performed at least five procedures:

- For 415 (43%) all of their patients were discharged on the same day of admission
- 547 (57%) had a mix of patients that either stayed in hospital overnight or were admitted and discharged on the same day
- The percentage of a specialist's patients that stayed in hospital overnight ranged between 0% and 43% with a median of 2%.

What are the reasons for a patient staying in hospital overnight following this procedure?

Why is there variation in the rate of patients that stay in hospital overnight between specialists?

Figure 74: Rate of Hospital Acquired Complications (per 1,000 separations)



Hospital Acquired Complications are a Medibank subset of 82 International Classification of Diseases (ICD) codes drawn from the Australian Commission of Safety and Quality in Health Care's list of high priority complications (see Table 55).

The rate of Hospital Acquired Complications was 1.3 per 1,000 separations.

For the 962 specialists who performed at least five procedures:

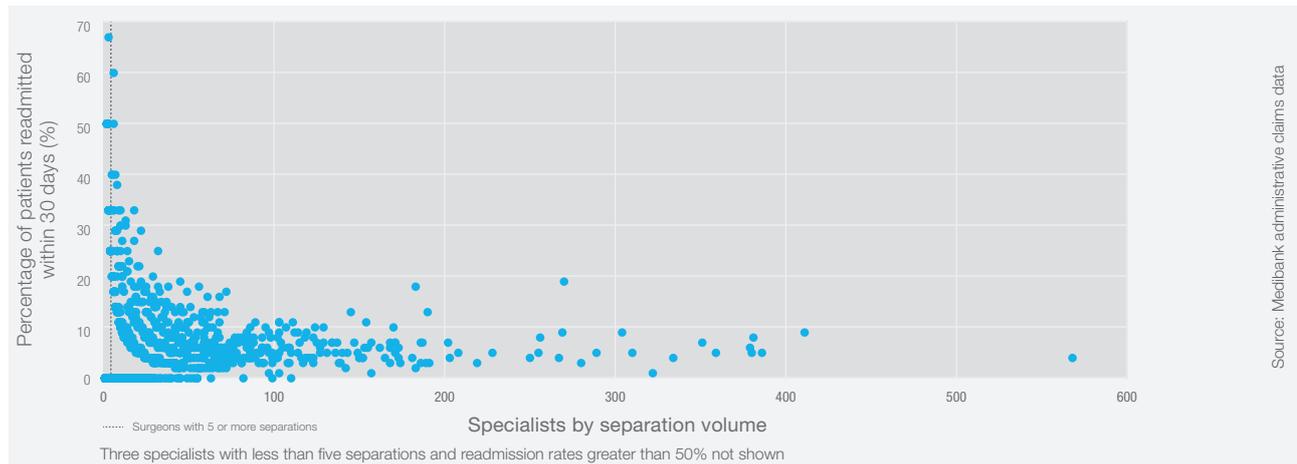
- 41 (4.3%) specialists had one or more separations during which at least one Hospital Acquired Complication was identified
- The rate of Hospital Acquired Complications for a surgeon ranged between 0 per 1,000 separations to 125 per 1,000 separations with a median of 0 per 1,000 separations.

Table 49: Hospital Acquired Complications identified during the hospital separation

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	4	53	0	57

What complications have you had for this procedure?

Figure 75: Percentage of patients readmitted within 30 days



Following 2,610 (6.2%) separations patients were readmitted (for all causes)* to a hospital within 30 days. Administrative claims data does not indicate whether the readmissions were planned or unplanned. The median age of patients readmitted was 66 years, compared with a median age of 62 years for those patients not readmitted. Of the 2,610 readmissions:

- 2,302 readmissions were to a private hospital (the same one or a different hospital). In 73 of these separations a Hospital Acquired Complication was identified (see Table 50)
- 308 were to a public hospital (where the patient was treated as a private patient).

For the 962 specialists who performed at least five procedures, the percentage of a specialist's patients readmitted within 30 days ranged between 0% and 60% with a median of 5%.

Readmissions to public hospitals, where patients were treated as public patients, are not captured in these datasets.

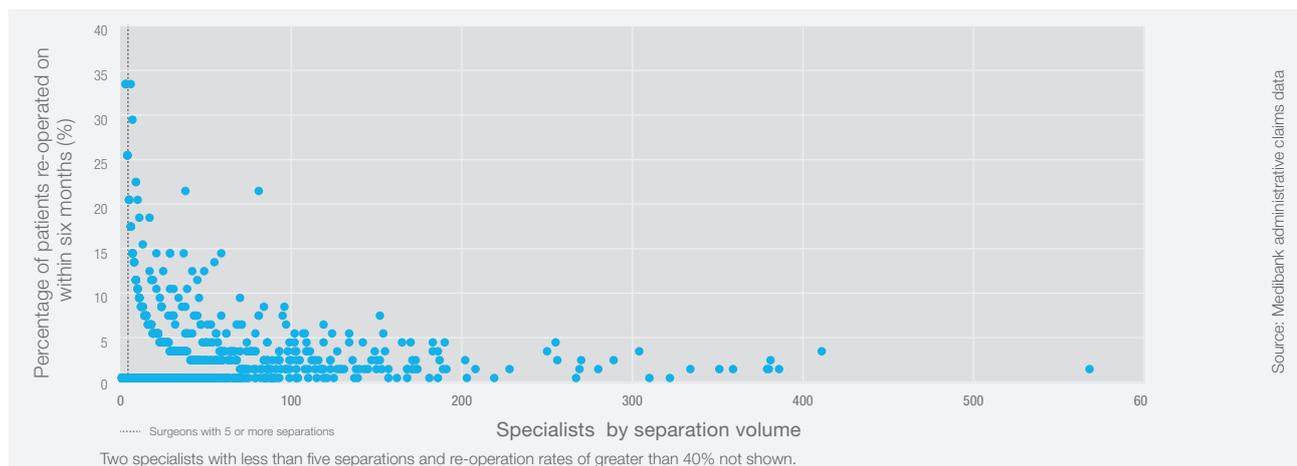
* Readmissions for rehabilitation, psychiatric treatment, dialysis and chemotherapy were excluded where identified. Separations involving a patient 80 years or older were also excluded.

Table 50: Hospital Acquired Complications identified on readmission

Category	Pressure injury	Falls	Infection	Surgical complication	VTE	Total
Number recorded	0	0	12	61	0	73

What are the reasons for readmission for this procedure, and what is the expected rate?

Figure 76: Percentage of patients re-operated on within six months



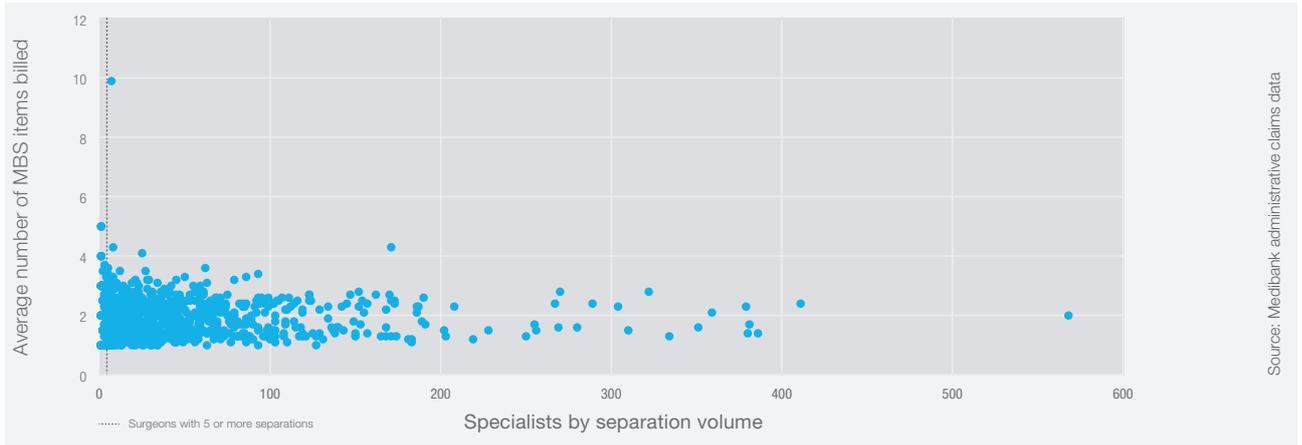
Patients were re-operated on (same procedure) within six months of discharge from hospital, in 2% of separations. The median age of patients re-operated on was 65 years compared with a median age of 63 years for those patients not re-operated on.

Of the 962 specialists who performed five or more procedures:

- 415 (43%) had one or more patients that were re-operated on within six months
- The percentage of a specialist's patients that were re-operated on within six months ranged between 0% and 33% with a median of 0%.

What are the reasons for re-operation for this procedure, and what is the expected rate?

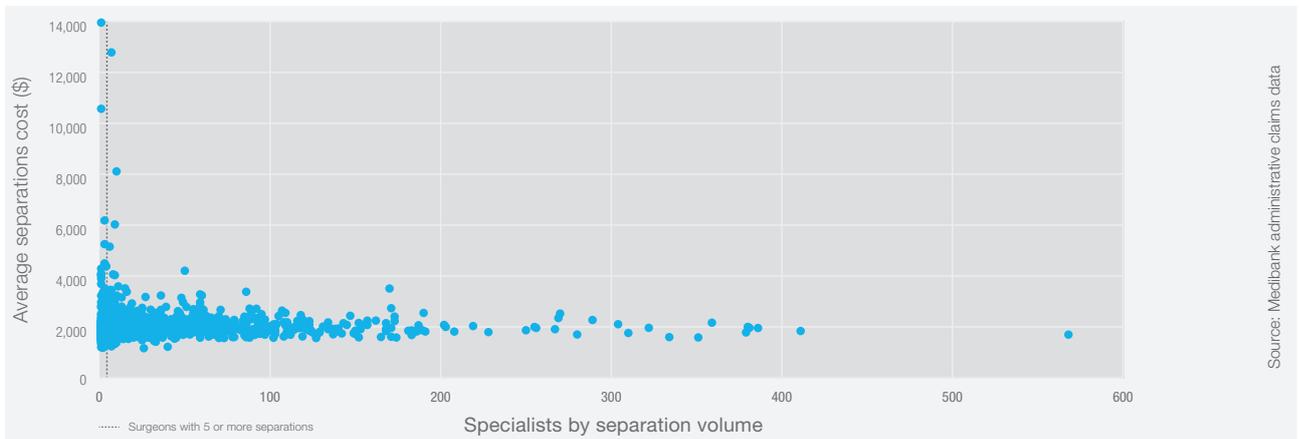
Figure 77: Average number of MBS items billed



The average number of MBS items billed by the specialist (the principal specialist only) was 1.9 per separation. Of the 962 specialists who performed five or more procedures, the average number of MBS items billed by a specialist ranged between 1 and 9.9 with a median 1.8.

What are the reasons for the wide variation in the number of MBS items billed?

Figure 78: Average separation cost



Two specialists with less than five separations and average separation costs greater than \$14,000 not shown

The separation cost includes the total charges for the hospital separation, including payments made by Medibank, Medicare and the patient. Costs include hospital, prostheses, medical practitioners and diagnostic services. The average separation cost was \$2,183.

For the 962 specialists who performed at least five procedures, the average separation cost of a specialist ranged between \$1,326 and \$12,951 with a median of \$2,146.

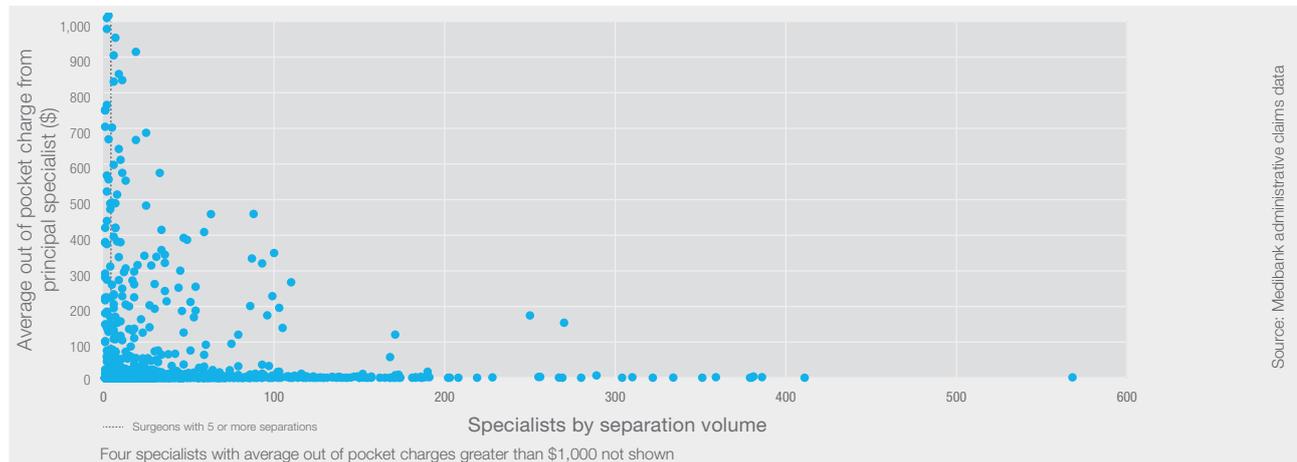
Table 51: Average separation cost by State/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Average separation cost	\$2,160	\$2,241	\$2,336	\$2,186	\$2,015	\$2,277	\$2,162	\$2,156

Are you aware of the associated costs for this procedure such as pathology, diagnostic imaging, assistants, anaesthetists, hospital bed fees?

What are the reasons for variation in separation costs?

Figure 79: Average principal specialist out of pocket charge



Patients were charged an out of pocket fee by the principal specialist in 7.6% of separations and the average charge was \$324.

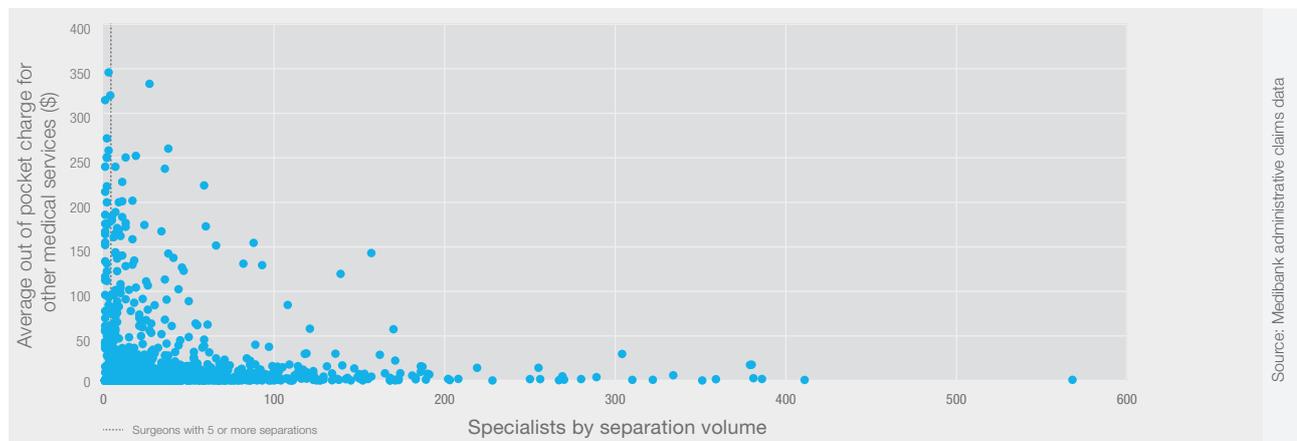
For the 962 specialists who performed at least five procedures, 569 (59%) did not charge any of their patients an out of pocket for the hospital admission. The average out of pocket charged ranged between \$0 and \$954 with a median of \$0.

Table 52: Principal specialist out of pocket charges by state/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	61%	10%	37%	6%	2%	2%	3%	3%
Average OOP	\$389	\$371	\$720	\$270	\$149	\$146	\$175	\$186

Why is there such variation in the average out of pocket charge?

Figure 80: Average out of pocket charge for other medical services



Patients were charged an out of pocket fee for other medical services (including charges raised by the anaesthetist, assistant specialist and for diagnostics) in 25% of separations and the average charge was \$55.

For the 962 specialists who performed at least 5 procedures, the average out of pocket charges received by their patients for other medical services ranged between \$0 and \$333 with a median of \$3.

Table 53: Out of pocket charges for other medical services by state/territory

State/territory	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
% of separations with OOP	5%	26%	73%	23%	21%	16%	28%	25%
Average OOP	\$166	\$54	\$161	\$55	\$23	\$11	\$37	\$108

Why is there such variation in the average out of pocket charge?

Clinical Variation Working Party membership

Prof David Watters
(General Surgeon, VIC), Chair

A/Prof Andrew Brooks
(Urologist, NSW)

Mr Graeme Campbell
(General Surgeon, VIC)

Dr Cathy Ferguson (Otolaryngologist
Head and Neck Surgeon, NZ)

Prof David Fletcher
(General Surgeon, WA)

Prof Mark Frydenberg
(Urologist, VIC)

Prof Michael Grigg
(Vascular Surgeon, VIC)

Dr Lawrence Malisano
(Orthopaedic Surgeon, QLD)

Prof Julian Smith
(Cardiothoracic Surgeon, VIC)

Mr Phil Truskett
(General Surgeon, NSW)

Mr Neil Vallance
(Otolaryngologist Head and Neck
Surgeon, VIC)

Mr Simon Williams
(Orthopaedic Surgeon, VIC)

Definitions

Table 54: Definitions

Term	Definition
ACT	Australian Capital Territory
HCP	Hospital Casemix Protocol. HCP data includes details of diagnoses, interventions, demographics and financial data relating to members' treatment in hospital
Hospital Acquired Complication	Medibank's subset of 82 ICD10 codes drawn from the Australian Commission of Safety and Quality in Healthcare's high priority complications dataset (see Table 55).
ICD	International Classification of Diseases. The ICD is the standard diagnostic tool for epidemiology, health management and clinical purposes.
ICU	Intensive Care Unit
MBS	Medicare Benefit Schedule
Median	The middle number in a given sequence of numbers
NSW	New South Wales
NT	Northern Territory
QLD	Queensland
SA	South Australia
Operation	The amount payable by the patient to a medical provider (including medical practitioner and diagnostics providers) for services performed during the hospital separation
Out of pocket charge	The amount payable by the patient to a medical provider (including medical practitioners and diagnostics provider) for services performed during the hospital separation
Principal surgeon/specialist	The surgeon/specialist who billed the MBS item with the highest fee in a separation
Primary procedure	The procedure performed on the patient with the highest value MBS fee
RACS	Royal Australasian College of Surgeons
Separation	The episode of admitted patient care
VIC	Victoria
WA	Western Australia

Table 55: Categories of Hospital Acquired Complications

Category	Sub-Category
Pressure Injury	NA (only includes type 3 and 4 pressure ulcers)
Falls	Cranial Injury Other Fracture Femoral Fracture
Healthcare Associated Infection	Urinary Tract Infection Blood Stream Infection Surgical Site Infection Prostheses Site Infection
Surgical Complication	Post-operative Haemorrhage and Haematoma Other surgical complications including, thrombophlebitis, transfusion reaction, accidental puncture and laceration, wound disruption
Venous Thromboembolism	Pulmonary Embolism Venous Thrombosis

