PREVENTION. CARE. RECOVERY.
Te Kaporeihana Āwhina Hunga Whara

ACC Treatment Injury Claims

Surgical Mesh-Related Claim Data

From 1 July 2005 to 30 June 2018
(13 fiscal years)

31/10/2018

Contents

Abbreviations

Abbreviation	Description
ACC	Accident Compensation Corporation
DOS	Date of surgery
DOI	Date of injury
POP	Pelvic Organ Prolapse
SUI	Stress Urinary Incontinence
POP & SUI	Combined Pelvic Organ Prolapse and Stress Urinary Incontinence
VMR	Ventral Mesh Rectopexy
U.S. FDA	United States Food and Drug Administration
TVT	Tension-free vaginal tape placed retropubically
TVT-O	Tension-free vaginal tape obturator

Colour references

Burgundy	Treatment injury claims
Purple	Surgical mesh-related claims
Blue	Surgical mesh-related claims for POP and/or SUI repair surgery
Orange	Surgical mesh-related claims for Hernia repair surgery
Sage	Surgical mesh-related claims for 'Other' mesh surgery

Terminology

Terminology	Description
Act	Refers to the Accident Compensation Act 2001
Surgical mesh-related claims	Refers to treatment injury claims where the claimed injury/symptom is directly caused by the surgical mesh, or there is a close relationship between the claimed injury/symptom and the mesh used in the surgical event
Fiscal year	Refers to the financial year/s (1 July to 30 June)
Cover decision	Refers to ACC's decision to 'accept' or 'decline' a claim for cover
Review	Refers to a term used in the Act when a client applies for an independent review of a decision ACC has made
Surgery year	Refers to the year of the mesh implant surgery
Treatment context	Refers to the over-arching type of treatment that the patient is receiving when the injury occurred
Treatment event	Refers to the type of treatment procedure that caused the injury or symptom. For surgical mesh-related claims, 'treatment event' refers to the mesh surgery type that caused the injury or symptom
Surgery type	Refers to the surgical event that caused the injury or symptom
Surgery type groups	Refers to a group of similar surgery types which are: 1. Pelvic Organ Prolapse (POP) and/or Stress Urinary Incontinence (SUI) repair 2. Hernia repair 3. 'Other' mesh surgery (This includes mesh removal surgery, sling surgery for male urinary incontinence, breast reconstruction and other reconstructive surgeries using surgical mesh)
POP and/or SUI repair	Refers to three main surgery types for POP and/or SUI repair which are: 1. Pelvic Organ Prolapse (POP) 2. Stress Urinary Incontinence (SUI) repair 3. Combined Pelvic Organ Prolapse & Stress Urinary Incontinence (POP & SUI) repair (NOTE: Combined POP & SUI repair refers to one single claim for one surgical event to treat both POP and SUI
Hernia repair	Refers to three main surgery types for hernia repair, which are: 1. Groin hernia repair 2. Ventral hernia repair 3. 'Other' hernia repair (This includes hiatus hernia, perineal hernia, parastomal hernia or the hernia type is unknown)
'Other' mesh surgery	Refers to 'Other' mesh surgery which includes mesh removal surgery, sling surgery for male urinary incontinence, breast reconstruction and other reconstructive surgeries using surgical mesh
Female Ventral Mesh Rectopexy	Refers to surgical treatment for posterior compartment Pelvic Organ Prolapse (POP) for females, and therefore the data is captured under POP and/or SUI repair surgery type group and POP surgery type
Primary injury/symptoms	Refers to the predominant injury/symptom caused by the treatment event
Secondary injury/symptoms	Refers to the injury/symptom in addition to the primary injury/symptom caused by the treatment event
Device type	Refers to the device name, type or brand of mesh

Introduction

On 20 March 2014 a private petition was sent to the Health Select Committee requesting that an independent inquiry be conducted regarding the safety of surgical mesh in New Zealand.

As a result of the petition, ACC undertook a review of all surgical mesh-related claims from 1 July 2005 to 30 June 2014 and made these findings publicly available. See ACC Surgical Mesh Review 2015

Since releasing the *ACC Surgical Mesh Review* in March 2015, ACC's actions have included:

- meeting regularly with Medsafe;
- improving the way information is recorded for surgical mesh-related claims to make them easier to identify;
- providing all its surgical mesh-related claim data to Medsafe, in addition to the 'belief of risk of harm'[1] reporting; and,
- making system changes in the surgical mesh-related claim data structure to capture additional and more specific information where possible.

Following the system changes, ACC retrospectively reclassified all its surgical mesh-related claim data.

ACC then undertook an additional analysis of all ACC surgical mesh-related claim data from 1 July 2005 to 30 June 2017 and published the findings (see ACC Surgical Mesh-related Claim Data 1 July 2005 to 30 June 2017).

This report provides a further update on surgical mesh-related claim data over 13 fiscal years from 1 July 2005 to 30 June 2018.

ACC has a role in passing information to the relevant regulatory authority where issues of safety are raised as it does not have a regulatory role. The regulatory authority can then make decisions that relate to medical device regulation. As each surgical mesh-related claim can reflect an injury or symptom/complication related to the use of surgical mesh, ACC continues to provide Medsafe with **all** surgical mesh-related claim data - irrespective of whether the claim met the Treatment Injury legislative criteria defined in the Accident Compensation Act 2001.

The ACC Surgical Mesh-Related Claim Data reports were done in collaboration with Mesh Down Under™ and Medsafe, who helped identify what information would be valuable to enhance understanding and help inform decisions.

This document will be uploaded to ACC's website and will be available to anyone with an interest in the ACC surgical mesh-related claims data.

[1] Section 284 of the Act

Background

ACC assesses all lodged surgical mesh-related claims for cover under the Treatment Injury legislative criteria (formerly Medical Misadventure) defined in the Accident Compensation Act 2001 ('the Act'). On 1 July 2005, Treatment Injury amendments were made to the Act.

The amendments moved ACC's role away from finding fault to one of treatment outcome, which was more in line with the broader scope and intent of ACC as a no-fault scheme. Expansion of cover was an anticipated outcome of the amendment.

The legislative changes support regulators through ACC providing information if there is a '***belief*** of risk of harm'. This is a significant change from ACC's previous role of being an agency that identified and assessed the actions of individual healthcare practitioners.

Section 32 of the Act provides cover for people who have sustained an injury while seeking or receiving treatment from one or more registered health professionals. For surgical mesh-related claims to be accepted, there must be a personal (physical) injury with a direct causal link between the treatment and the claimed mesh-related injury. ACC also needs to consider the relevant circumstances that relate to:

- the person's underlying health condition; and,
- the clinical knowledge at the time of treatment.

ACC's decision therefore needs to be supported by clinical evidence and be based on relevant patient and treatment factors, which can vary from case to case.

When treatment injury claims are being considered, ACC must also assess for a 'belief of risk of harm to the public'. Surgical mesh-related events that are assessed as serious[2] and sentinel[3] are reported to Medsafe monthly.

In addition, as each claim can reflect an injury or symptom/complication related to the use of surgical mesh, ACC provides all surgical mesh-related claim data – irrespective of whether the claim is accepted or declined or whether it is assessed as a serious or sentinel event – to Medsafe, the regulator of medical devices in New Zealand.

[2] A serious event or pattern of events that has the potential to result in death or major permanent loss of function not related to the natural course of the claimant's illness or underlying condition

[3] An event during care or treatment that has resulted in an unanticipated death or major permanent loss of function not related to the natural course of the claimant's illness or underlying condition, pregnancy or childbirth

Data Information

- When assessing a claim for treatment injury, ACC collects the data required to establish cover.
- The data for this report is captured from treatment injury claims that have been lodged with, and decided by, ACC between 1 July 2005 and 30 June 2018.
- Treatment injury claim rates are reflective of claims lodged with ACC, and are not a proxy for the incident of injuries caused by treatment or the quality of care in the health sector.
- It is possible that some people may have suffered complications related to the use of surgical mesh, but have not lodged a claim with ACC. This means that ACC data should be considered alongside other sources of surgical mesh-related information.
- One client may have more than one surgical mesh-related claim lodged with ACC, so the number of claims may be higher than the number of clients.
- The data in this document **excludes pending decisions** (surgical mesh-related claims still being assessed).
- The review[4] data includes the number of reviews lodged for surgical mesh-related claim cover decisions. It also includes the number of claims that went to review **and** have a review outcome.
- When assessing a claim for treatment injury, ACC collects the available clinical evidence to establish that a physical injury occurred while the person was seeking or receiving treatment from one or more registered health professionals.
- Since the introduction of Treatment Injury provisions on 1 July 2005, ACC no longer collects the names of individual health professionals involved in the client's treatment because the change moved ACC's role away from finding fault, more in line with ACC as a no-fault scheme. ACC does not require this information to determine cover. However, the context in which the treatment event occurred is collected.
- ACC is mandated to collect relevant and available clinical evidence to reach a cover decision in a timely manner. This may mean that some technical details (e.g. medical device name's, batch numbers etc.) are not required in order to make a decision.
- For device types, ACC data is a combination of device name, type or brand of mesh. This way of capturing device types reflects how the device information is often recorded in clinical notes. Some claims have no mesh details; some have full mesh details, while other have only limited mesh information in the clinical notes (e.g. only the device type or the acronym TVT or TVT-O are provided). These device types are combined because sometimes TVT does not only refer to tension-free vaginal tape manufactured by Ethicon, it can also refer to a number of TVT-like sling alternatives. In addition, it is noted that sometimes TVT-O sling is described as TVT. Therefore the dropdown item "TVT/TVT-O" is used to capture both the Ethicon TVT and those TVT-like slings where the actual name/brand was not

[4] Review is a term used in the Act when a client applies for an independent review of a decision made by ACC.

specified in the clinical notes. Where more details of the TVT/TVT-O is available, the specific name/brand of the TVT/TVT-O would be recorded, e.g. Monarc.

- To prevent the possibility of identifying a person, any result that includes claim counts fewer than four (n=1, 2 or 3) will be presented as "<4". For graphs with percentages, these are not provided for <4 values. To provide approximate percentages and/or totals in tables, "<4" is assumed as two (2).
- The breakdown of data for 'Other' mesh surgery is limited due to low numbers.
- Ventral Mesh Rectopexy (VMR), a surgical treatment for posterior compartment pelvic organ prolapse, has been recently added as a new value in ACC's data. This allows more precise data to be extracted for VMR surgical treatment, and hence included in the ACC surgical mesh analysis. Conclusions cannot be drawn relating to the statistical significance or accuracy from this initial analysis of rectopexy mesh procedures.
- In order to be consistent with the previous report, female VMR data is reported under POP and/or SUI repair surgery type group and POP surgery type. Male VMR data is reported under 'Other' mesh surgery.
- The privacy of individuals has been maintained when collaborating with Mesh Down Under™.

Breakdown of surgical mesh-related claim data from 1 July 2005 to 30 June 2018 (13 fiscal years)

ACC's data is captured from information received during the assessment of a claim, and may be a subset of the data Medsafe receive from other sources. ACC now provides more specific information to benefit Medsafe and anyone with an interest in the surgical mesh-related claims.

The ACC Surgical Mesh-Related Claim Data reports were done in collaboration with Mesh Down Under™ (www.meshdownunder.co.nz) and Medsafe (www.Medsafe.govt.nz), who helped identify what information would be valuable to enhance understanding and help inform decisions.

This document is written in a way that each graph or table can stand alone, so some information may be repeated.

Any questions in relation to this report, please email Treatment Injury Cover Assessment Centre at TI.Info@acc.co.nz

1. Are treatment injury claims increasing and what are the cover decision outcomes?

Figure 1: Number of treatment injury claims accepted and declined by fiscal year

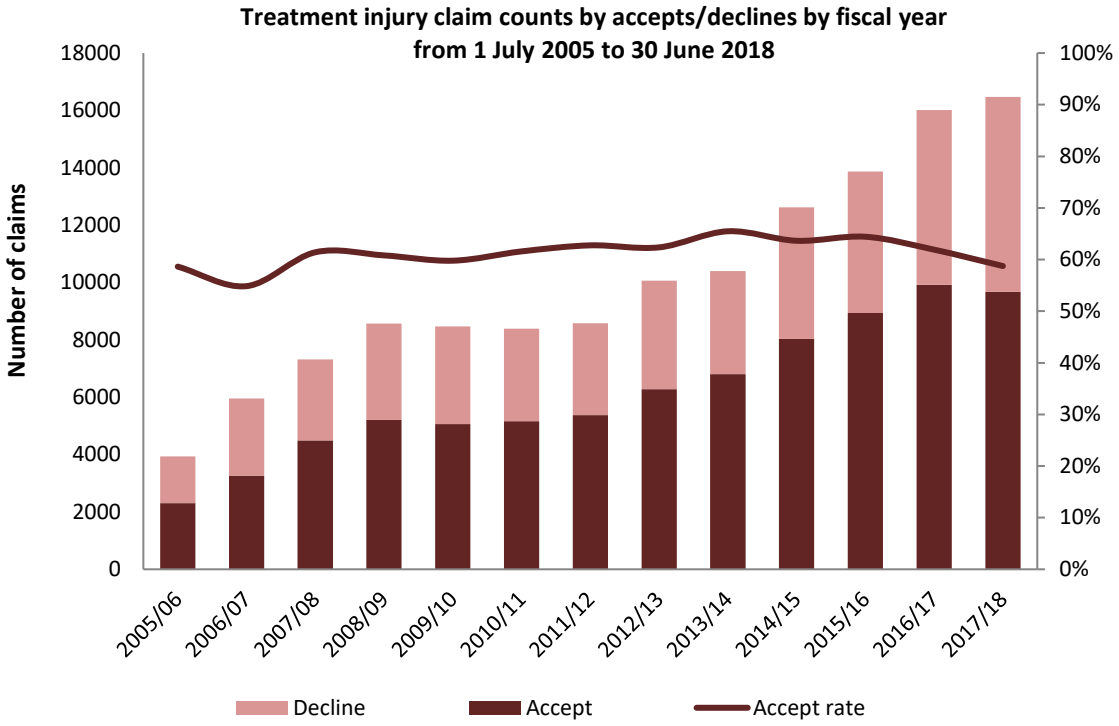


Figure 1 shows that ACC made cover decisions for more than 130,000 treatment injury claims over 13 fiscal years. Of the 130,000 claims, approximately 62% of claims are accepted and 38% are declined.

Since the implementation of the Treatment Injury provisions on 1 July 2005, claims increase steadily as anticipated. From 2008/09 onwards, claim volumes plateau for approximately four years to 2011/12 and then start to increase again from 2012/13 onwards. Claim counts in 2017/18, at over 16,000, are almost twice the level of 2011/12. There is no significant increase in claims from 2016/17 to 2017/18.

Explaining the increase in claims is challenging, as the extent of treatment injuries is not fully known in New Zealand. There is no single way of measuring injuries as different health systems use different ways of detecting where/how/why and whether a person has suffered a physical injury as a result of treatment. This includes different reporting systems, reportable events processes and treatment injury claims.

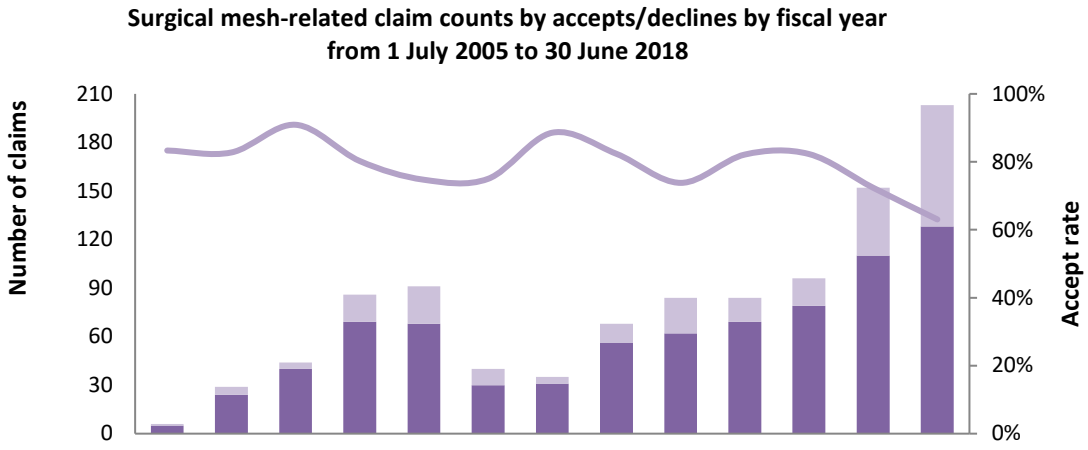
Factors that may be contributing to the growth of treatment injury claims lodged with ACC could include:

- increased volumes of treatment across the health system,
- greater risk factors in the patient population, and;
- greater efforts to encourage reporting of treatment injuries.

Anecdotally we also understand that the increase in claims may indicate a better understanding and awareness of treatment injuries – both from clients and health practitioners.

It is important to note that treatment injury claim rates are reflective of claims lodged with ACC and are not a proxy for the incidence of injuries caused by treatment or the quality of care in the health sector.

Figure 2: Number of surgical mesh-related claims accepted and declined by fiscal year



	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Total decision	~7	29	44	86	91	40	35	68	84	84	96	152	203
Decline	<4	5	4	17	23	10	4	12	22	15	17	42	75
Accept	5	24	40	69	68	30	31	56	62	69	79	110	128
Accept rate	~71%	83%	91%	80%	75%	75%	89%	82%	74%	82%	82%	72%	63%

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To provide approximate percentages and totals, "<4" is assumed as 2.

Figure 2 shows that ACC made cover decisions on 1,018 surgical mesh-related claims over 13 fiscal years.

Of the 1,018 claims, 771 claims (76%) are accepted and 247 claims (24%) are declined. The accept rate varies across the 13 fiscal years, ranging from 63% to 91%. The acceptance rate for surgical mesh-related claims is higher than the overall acceptance rate for treatment injury claims; however the difference is smaller in 2017/18.

Since the implementation of the Treatment Injury provisions on 1 July 2005, claims increase steadily as anticipated. The pattern for surgical mesh-related claims in 2008/09 and 2016/17 is somewhat similar (except for 2010/11 and 2011/12) to the overall increase in the treatment injury claim counts - see Figure 1.

There is initially a 93% increase in the number of surgical mesh-related claims in 2008/09 compared to the year before. In 2010/11 and 2011/12 the number of claims dip and start increasing again in 2012/13. There is a 58% increase in claim counts for 2016/17 compared to the previous fiscal year, and a further 34% increase in 2017/18 compared to 2016/17. The claims count peak in 2017/18 at 203.

Explaining 'the increase in claims is challenging, as the extent of complications from surgical mesh or associated treatment injuries is not fully known in New Zealand. There is no single way of measuring injuries as different health systems use different ways of detecting where/how/why and whether a person has suffered a physical injury as a result of treatment. This includes different reporting systems, reportable events processes and treatment injury claims.

Possible reasons for the increase in claims could include:

- there are more people who have complications/injuries associated with surgical mesh,
- there is more awareness of the potential risks associated with surgical mesh (both from clients and health practitioners),
- there was an increase in awareness after two U.S. FDA communications in 2008 and 2011,
- the Health Select Committee also began inquiring into the use of surgical mesh in 2014,
- there was the *ACC Surgical Mesh Review* in March 2015; an update in 2017,
- there is on-going media attention in New Zealand and overseas, and
- Medsafe's regulatory action on surgical mesh products in 2018.

Later in the report, data in Figure 9 shows that claims lodged by GPs have contributed to the increase in surgical mesh-related claims. ACC made a commitment to the Mesh Down Under group to enhance GPs knowledge about the complications/injuries relating to surgical mesh by drawing their attention to the ACC surgical mesh review and ongoing claim data updates. The expected outcome was that GPs might recognise possible complications/injuries from surgical mesh and lodge claims earlier. Anecdotally we also understand that more clients are also asking to have their claim lodged for ACC to assess.

The increase in claims lodged by GPs has unfortunately also contributed to a decrease in the accept rate for 2016/17 and 2017/18 as more claims were lodged without supporting clinical evidence of an injury or a causal link to treatment. Of the 247 declined claims, 44% (n=108) relate to claims lodged by GPs. This is higher than other lodging provider groups (see pages 24-28). ACC will continue to talk to GPs and our other lodging providers to help them understand what clinical evidence is required when assessing a treatment injury claim.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. Of the 1,018 claims, 13 relate to female VMR and fewer than four claims relate to male VMR surgery. Of the 13 claims relating to female VMR, nine (69%) are accepted and four (31%) are declined. The earliest decision relating to female VMR is in 2008/09. Of the 13 claims, five (38%) are decided in 2017/18.

It is important to note that when a claim has been declined, ACC can reassess the claim when new clinical evidence is provided, which means the accept rate can change over time.

Figure 3: Number of surgical mesh-related claims accepted and declined by treatment event (surgery type groups)

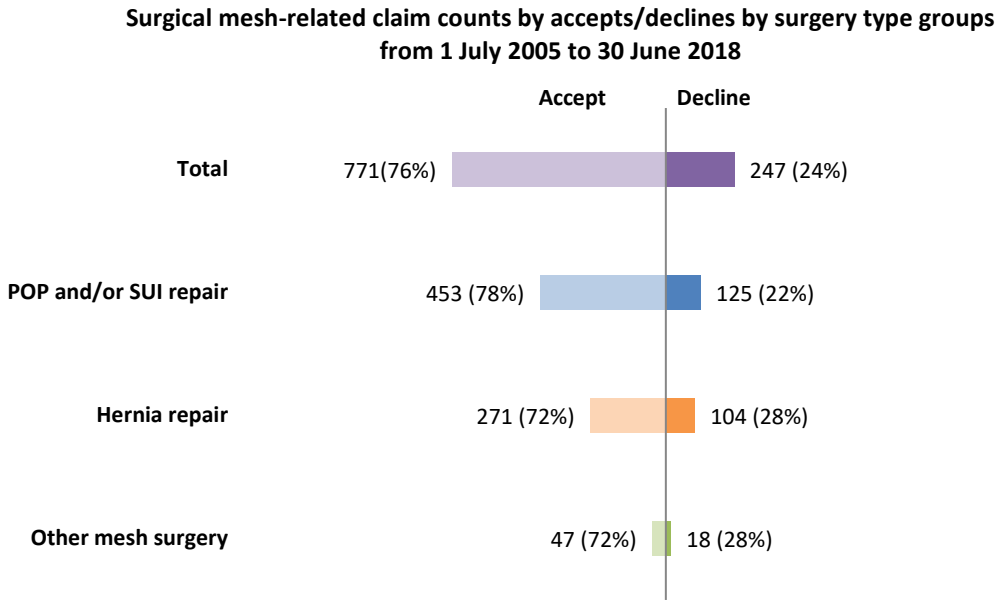


Figure 3 shows the 1,018 surgical mesh-related claims by accepts and declines by surgery type groups.

ACC collects data relating to the injury and associated treatment events. Treatment event is defined as the type of treatment procedure that caused the injury or symptom. For surgical mesh-related claims, treatment event refers to the mesh surgery type that caused the injury or symptom.

ACC data has identified three main surgery type groups, which are:

1. Pelvic Organ Prolapse (POP) and/or Stress Urinary Incontinence (SUI) repair
2. Hernia repair
3. 'Other' mesh surgery (This includes mesh removal surgery, sling surgery for male urinary incontinence, breast reconstruction and other reconstructive surgeries using surgical mesh)

Of the 1,018 claims, 76% are accepted. This is a decrease from 79% in 2016/17. This is due to an increasing number of claims lodged with insufficient clinical evidence e.g. no identified physical injury other than the original necessary surgery.

Of the 1,018 claims, the accept rate for POP and/or SUI repair surgery is 78% (n=453), which is significantly[5] higher than hernia repairs. The accept rates are the same for hernia repair and 'Other' mesh surgery.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group and the male VMR claims are reported under 'Other' mesh surgery.

Of the 1,018 claims, 13 relate to female VMR and fewer than four claims relate to male VMR surgery. Of the 13 claims relating to female VMR, nine (69%) are accepted and four (31%) are declined. The reasons for decline includes that the clinical evidence did not identify a physical injury or causal link to treatment.

See Table 2 for examples of the decline reasons.

[5] A Chi-square test of independence was calculated comparing the cover decision in POP and/or SUI repair and hernia repairs. The result was statistically significant ($\chi^2(1) = 4.6, p < 0.05$)

Table 1: Number of declined surgical mesh-related claims by surgery type group and decline reason

Declined surgical mesh-related claim counts by surgery type group and decline reason from 1 July 2005 to 30 June 2018			
Surgery type group	**Decline reason**	**2005/06-2016/17**	**2005/06-2017/18**
POP and/or SUI repair	No Injury	52 (30%)	67 (27%)
	Ordinary consequence of a treatment	24 (14%)	29 (12%)
	No causal link	12 (7%)	22 (9%)
	Withdrawn	<4 (-%)	<4 (-%)
	Lack of information	<4 (-%)	<4 (-%)
	Necessary part of treatment	<4 (-%)	<4 (-%)
	Desired results not achieved	0 (0%)	<4 (-%)
	Subtotal	**92 (53%)**	**125 (51%)**
Hernia repair	No Injury	25 (15%)	39 (16%)
	No causal link	24 (14%)	30 (12%)
	Ordinary consequence of a treatment	14 (8%)	27 (11%)
	Desired results not achieved	<4 (-%)	<4 (-%)
	Underlying health conditions	<4 (-%)	<4 (-%)
	Necessary part of treatment	<4 (-%)	<4 (-%)
	Withdrawn	<4 (-%)	<4 (-%)
	Subtotal	**70 (41%)**	**104 (42%)**
Other mesh surgery	No Injury	<4 (-%)	6 (2%)
	Ordinary consequence of a treatment	<4 (-%)	6 (2%)
	No causal link	<4 (-%)	<4 (-%)
	Underlying health conditions	<4 (-%)	<4 (-%)
	Previously declined medical misadventure claim	<4 (-%)	<4 (-%)
	Subtotal	**10 (6%)**	**18 (7%)**
Total		**172 (100%)**	**247 (100%)**

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4(-%)"

Table 1 shows a breakdown of declined surgical mesh-related claims by decline reason by surgery type groups and the comparison between 2005/06 to 2016/17 and 2005/06 to 2017/18.

ACC collects data relating to the injury and associated treatment events. Treatment event is defined as the type of treatment procedure that caused the injury or symptom. For surgical mesh-related claims, treatment event refers to the mesh surgery type that caused the injury or symptom.

ACC data has identified three main surgery type groups, which are:

1. Pelvic Organ Prolapse (POP) and/or Stress Urinary Incontinence (SUI) repair
2. Hernia repair
3. 'Other' mesh surgery (This includes mesh removal surgery, sling surgery for male urinary incontinence, breast reconstruction and other reconstructive surgeries using surgical mesh)

Of the 1,018 surgical mesh-related claims, 247 (24%) are declined. Compared to 2016/17, the total declined surgical mesh-related claims increase by 75, from 172 to 247.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group and the male VMR claims are reported under 'Other' mesh surgery.

Of the 1,018 claims, 13 claims relate to female VMR and fewer than four claims relate to male VMR surgery. Of the 13 claims relating to female VMR, nine (69%) are accepted and four (31%) are declined. The reasons for decline includes that the clinical evidence did not identify a physical injury or causal link to treatment.

Treatment injury claims must meet the legislative criteria and be supported by clinical evidence, taking into account the relevant patient and treatment factors which can vary from case to case. A number of surgical mesh-related claims are lodged for pain with no clinical evidence that a physical injury has been sustained causing the pain.

ACC in no way seeks to minimise the impact of the pain experienced, and what people are going through. However without clinical evidence of a physical injury the legislative criteria is not met and therefore the claim cannot be covered.

There are also claims where ACC has been unable to establish a causal link between the claimed injury and the treatment provided. In other cases, given the nature of the client's underlying health condition, the claimed injury may be considered an ordinary consequence of treatment.

See Table 2 for examples of the decline reasons.

The data in Figure 9 shows that the claims lodged by GPs have contributed to the increase in surgical mesh-related claims.

With the increase in claims lodged, this has unfortunately contributed to a decrease in the accept rate for 2016/17 and 2017/18, because more claims are lodged without supporting clinical evidence of an injury or causal link to treatment. Of the 247 declined claims, 44% (n=108) relate to claims lodged by GPs. This is higher than other lodging provider groups (see Page 26, Table 7). ACC will continue to talk to GPs and our other lodging providers to help them understand what clinical evidence is required when assessing a treatment injury claim.

It is important to note that when a claim has been declined, ACC can reassess the claim when new clinical evidence is provided which means the accept rate can change over time.

Table 2: Examples of the decline reasons

Decline reason	Example
No Injury	The decision to decline a claim on the basis of no physical injury relates to where the clinical evidence fails to demonstrate physical damage is present e.g. pain may be present however case law states that pain of itself is insufficient to establish physical injury.
Ordinary consequence of a treatment	The decision to decline a claim on the basis that the injury is an ordinary consequence of treatment relates to where there are client specific factors that have increased the likelihood of the injury occurring. An example would be a client who undergoes surgical treatment where mesh is successfully inserted and resolves the client's underlying problems for several years. The client develops evidence of mesh erosion several years later when she is menopausal, and has thinning of vaginal tissues and vaginal atrophy that is likely hormone related. If the client is not on hormone replacement therapy, these factors increase the likelihood of a subsequent complication developing where mesh is present, and is likely to represent an ordinary consequence of treatment.
No causal link	The decision to decline a claim on the basis of no causal link is where the clinical evidence is clear in determining that there is no link between the claimed complications and the treatment. An example would be that some eight years after a hernia repair with mesh, the client develops an infection at the original incision site. Prior to the client's presentation there had been no prior evidence of an infection at that site. Therefore, clinical evidence does not support the infection is caused by treatment and there is no causal link.
Necessary part of treatment	The decision to decline a claim on the basis that complications of surgical mesh insertion are considered to be a necessary part of treatment is more likely to relate to problems with the surgical incision where there is no additional injury; e.g. poor healing of a necessary incision. The incision is necessary for the procedure however the healing relates to the clients own healing capability.
Lack of information	The decision to decline a claim on the basis of a lack of information is where the provider lodges a claim and then doesn't provide ACC with any clinical evidence that would allow ACC to make a cover decision on the specific facts of the case. If the clinical evidence is subsequently received, ACC would then investigate the substantive claim if the client consents for ACC to do so.
Withdrawn	The decision to decline a claim on the basis that the claim was withdrawn by the client means that ACC no longer has client consent to continue investigating the claim.
Desired results not achieved	The decision to decline a claim on the basis that desired results were not achieved may relate to situations such as the 'look' of a surgical incision, where the client is unhappy with the way the incision looks but there was no additional injury over and above the surgical incision.
Underlying health condition	The decision to decline a claim on the basis that the claimed injury is an underlying health condition is where the clinical evidence shows the client's problem was pre-existing. The client may have suffered nerve symptoms prior to surgery and post-surgery the symptoms remain, and treatment fails to resolve the client's symptoms.
Previously declined under medical misadventure claim	A claim that has been previously considered under the medical misadventure provisions is unable to be considered under the treatment injury provisions unless there was no physical injury identified at the time of the first investigation; a physical injury is subsequently identified, and a new claim is lodged. This can be considered as a treatment injury. If the claim was declined on criteria other than physical injury, then any further consideration must be under the same legislation as the original decision.

Table 3: Number of surgical mesh-related claims with a review outcome

Surgical mesh-related claim counts by review outcome from 1 July 2005 to 30 June 2018		
Review outcome	**n**	**%**
Dismissed	17	34%
Quashed	8	16%
Withdrawn/settled	25	50%
Total	**50**	**100%**

Table 3 shows the 50 surgical mesh-related claims that went to review and have a review outcome.

Review refers to a term used in the Act when a client applies for an independent review of a decision ACC has made.

ACC data has identified three main review outcomes on treatment injury decisions, these are:

1. Dismissed: ACC's original decision was upheld and the decision remains in force
2. Quashed: ACC's original decision was overturned, or ACC was required to investigate further and make a fresh cover decision in accordance with directions given by the reviewer
3. Withdrawn/settled: The review application was withdrawn by the client, or ACC settled the review, prior to proceeding to a hearing

Of the 1,018 surgical mesh-related claims, 64 (6%) claims have reviews lodged. Of the 64, 50 claims have a review outcome.

Of these review outcomes:

- 17 are dismissed with a median timeframe of 187 days from review lodgement to review outcome.
- Eight are quashed with a median timeframe of 201 days from review lodgement to review outcome.
- 25 reviews did not proceed to a hearing and are withdrawn/settled. The median timeframe is 50 days from review lodgement to review outcome. A review application may be withdrawn by the client prior to proceeding to the review, or ACC agreed to further investigate the decision upon receiving new clinical evidence, or the original decision is amended before a hearing.

Please note that the data relates to reviews on treatment injury cover decisions only and excludes reviews for ACC's other decisions, such as entitlements e.g. If a claim is accepted, a client can request entitlements (e.g. compensation, surgery), but entitlements cannot be provided until a claim has been accepted for cover.

Table 4: Number of surgical mesh-related claims for POP and/or SUI repair with a review outcome

Surgical mesh-related claim counts for POP and/or SUI repair by review outcome from 1 July 2005 to 30 June 2018		
Review outcome	**n**	**%**
Dismissed	9	28%
Quashed	5	16%
Withdrawn/settled	18	56%
Total	**32**	**100%**

Table 4 shows the surgical mesh-related claims for POP and/or SUI repair that went to review and have a review outcome.

Review refers to a term used in the Act when a client applies for an independent review of a decision ACC has made.

ACC data has identified three main review outcomes on treatment injury decisions, these are:

1. Dismissed: ACC's original decision was upheld and the decision remains in force
2. Quashed: ACC's original decision was overturned, or ACC was required to investigate further and make a fresh cover decision in accordance with directions given by the reviewer
3. Withdrawn/settled: The review application was withdrawn by the client, or ACC settled the review, prior to proceeding to a hearing

Of the 578 surgical mesh-related claims for POP and/or SUI repair, 41 (7%) claims have reviews lodged. Of 41, 32 claims have a review outcome.

Of these review outcomes:

- Nine are dismissed with a median timeframe of 328 days from review lodgement to review outcome
- Five are quashed with a median timeframe of 197 days from review lodgement to review outcome.
- 18 reviews did not proceed to a hearing and are withdrawn/settled. The median timeframe is 37 days from review lodgement to review outcome. A review application may be withdrawn by the client prior to proceeding to the review, or ACC agreed to further investigate the decision upon receiving new clinical evidence, or the original decision was amended before a hearing.

Please note that the data relates to reviews on treatment injury cover decisions only and excludes reviews for ACC's other decisions, such as entitlements e.g. If a claim is accepted, a client can request entitlements (e.g. compensation, surgery), but entitlements cannot be provided until a claim has been accepted for cover.

Table 5: Number of surgical mesh-related claims for hernia repair with a review outcome

Surgical mesh-related claim counts for hernia repair by review outcome from 1 July 2005 to 30 June 2018		
Review outcome	**n**	**%**
Dismissed	7	~50%
Quashed	<4	~14%
Withdrawn/settled	5	~36%

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To be able to provide approximate percentages, "<4" is assumed as 2.

Table 5 shows the surgical mesh-related claims for hernia repair that went to review and have a review outcome.

Review refers to a term used in the Act when a client applies for an independent review of a decision ACC has made.

ACC data has identified three main review outcomes on treatment injury decisions, these are:

1. Dismissed: ACC's original decision was upheld and the decision remains in force
2. Quashed: ACC's original decision was overturned, or ACC was required to investigate further and make a fresh cover decision in accordance with directions given by the reviewer
3. Withdrawn/settled: The review application was withdrawn by the client, or ACC settled the review, prior to proceeding to a hearing

Of the 375 surgical mesh-related claims for hernia repair, 20 (5%) claims have reviews lodged. Of the 20, fewer than 16 claims have a review outcome.

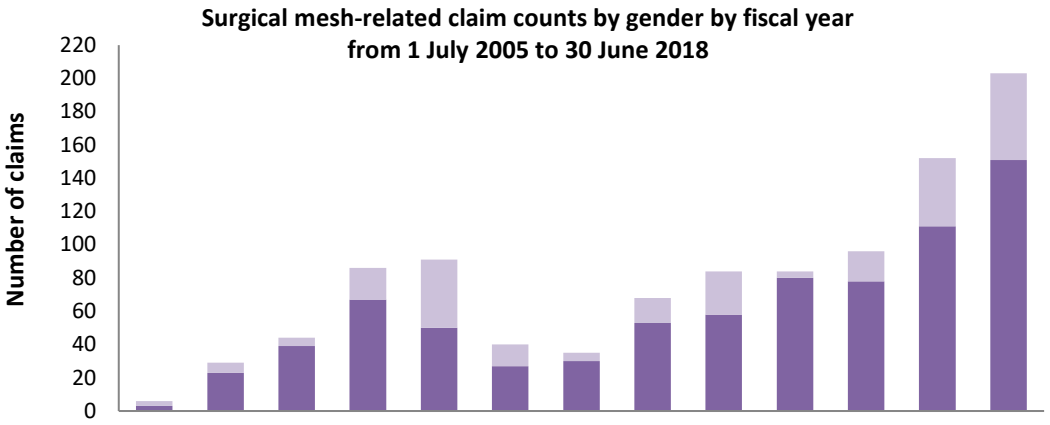
Of these review outcomes:

- Seven are dismissed with a median timeframe of 148 days from review lodgement to review outcome.
- Fewer than four reviews are quashed with a median timeframe of 246 days from review lodgement to review outcome.
- Five reviews did not proceed to a hearing and are withdrawn/settled. The median timeframe is 128 days from review lodgement to review outcome. A review application may be withdrawn by the client prior to proceeding to the review, or ACC agreed to further investigate the decision upon receiving new clinical evidence, or the original decision was amended before a hearing.

Please note that the data relates to reviews on treatment injury cover decisions only and excludes reviews for ACC's other decisions, such as entitlements e.g. If a claim is accepted, a client can request entitlements (e.g. compensation, surgery), but entitlements cannot be provided until a claim has been accepted for cover.

2. What are the demographics for surgical mesh-related claims?

Figure 4: Number of surgical mesh-related claims by gender by fiscal year



	2005 /06	2006 /07	2007 /08	2008 /09	2009 /10	2010 /11	2011 /12	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18
Total decision	~4	29	44	86	91	40	35	68	84	84	96	152	203
Male	<4	6	5	19	41	13	5	15	26	4	18	41	52
Female	<4	23	39	67	50	27	30	53	58	80	78	111	151

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To provide approximate totals, "<4" is assumed as 2.

Figure 4 shows the 1,018 surgical mesh-related claims by gender group by fiscal year.

Of the 1,018 claims, 76% (n=770) of claims associate with the female gender group and 24% (n=248) with the male gender group.

Claim counts for female clients are the highest in each fiscal year, with an increase in claims from 2015/16 to 2016/17 and another increase in 2017/18.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. Of the 1,018 claims, 13 relate to female VMR and fewer than four claims relate to male VMR surgery. The earliest decision relating to female VMR is in 2008/09. Of the 13 claims, five (38%) are decided in 2017/18.

Claim counts for male clients are more sporadic, with some very low volumes in 2011/12 and 2014/15. However, claims for the male gender group are higher in 2009/10 and peaked in 2017/18. There is an increase in claims from 2014/15 to 2015/16, with an even higher increase in 2016/17 and again in 2017/18.

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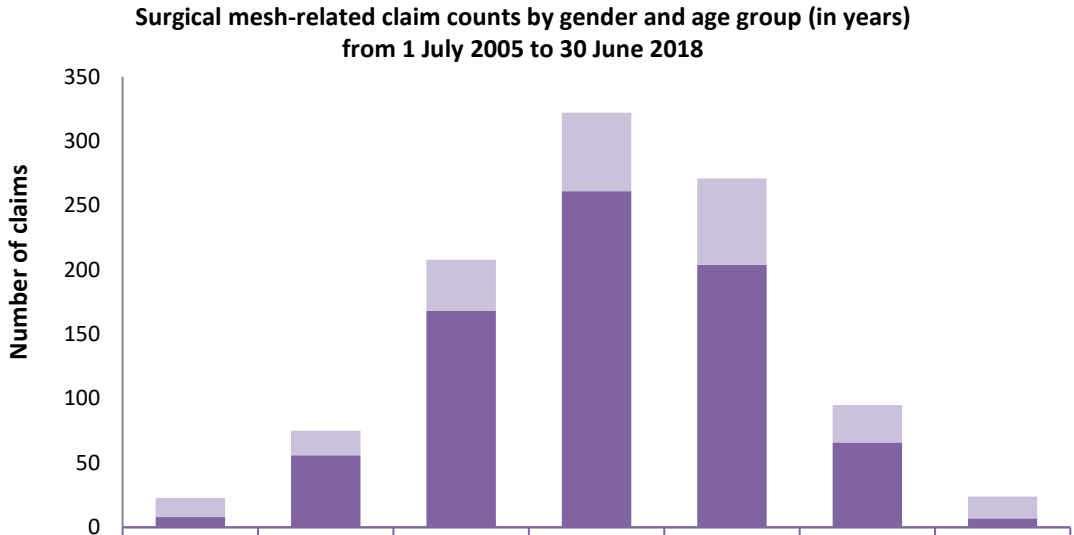
Figure 5: Number of surgical mesh-related claims by gender by age group



	<30	30-39	40-49	50-59	60-69	70-79	> = 80
Total decision	23	75	208	322	271	95	24
Male	15	19	40	61	67	29	17
Female	8	56	168	261	204	66	7

Figure 5 shows the 1,018 surgical mesh-related claims by gender and age group distribution. The age group relates to the age of the client as at the date of injury [6].

Of the 1,018 claims, the 50-59 years age group has the highest number of claims (32%, n=322), followed by the 60-69 age group (27%, n=271) and the 40-49 years' age group (20%, n=208).

Claim counts for male clients are highest in the 60-69 years' age group.

Claim counts for female clients are highest in the 50-59 years' age group.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. Of the 1,018 claims, 13 relate to female VMR and fewer than four claims relate to male VMR surgery. Claims relating to female VMR procedure is seen in almost all age groups except the >=80 age group. The numbers are all less than four for each age group.

[6] Date of injury refers to the date the person first seeks or receives treatment for the symptoms of that personal injury. AC Act 2001, section 38: subsection (1) and (2) applies

Table 6: Number of surgical mesh-related claims by gender by surgery type groups and surgery type

Surgical mesh-related claim counts by gender by surgery type groups and surgery type from 1 July 2005 to 30 June 2018							
Surgery type group	Surgery type	Gender				Total	%
		Female	%	Male	%		
POP and/or SUI repair	POP repair	226	100%	0	0%	**226**	**100%**
	SUI repair	167	100%	0	0%	**167**	**100%**
	POP & SUI repair	185	100%	0	0%	**185**	**100%**
	Subtotal	**578**	**100%**	**0**	**0%**	578	100%
Hernia repair	Groin hernia repair	22	17%	107	83%	**129**	**100%**
	Ventral hernia repair	112	51%	108	49%	**220**	**100%**
	Other hernia repair	12	46%	14	54%	**26**	**100%**
	Subtotal	**146**	**39%**	**229**	**61%**	375	100%
Other mesh surgery	Includes mesh removal surgery, sling surgery for male urinary incontinence, breast reconstruction and other reconstructive surgeries using mesh.	**46**	**71%**	**19**	**29%**	**65**	**100%**
Total		**770**	**76%**	**248**	**24%**	**1,018**	**100%**

Table 6 shows the 1,018 surgical mesh-related claims by gender by surgery type groups and surgery type.

ACC collects data relating to the injury and associated treatment events. Treatment event is defined as the type of treatment procedure that caused the injury or symptom. For surgical mesh-related claims, treatment event refers to the mesh surgery type that caused the injury or symptom.

ACC data has identified three main surgery type groups, which are:

4. Pelvic Organ Prolapse (POP) and/or Stress Urinary Incontinence (SUI) repair
5. Hernia repair
6. 'Other' mesh surgery (This includes mesh removal surgery, sling surgery for male urinary incontinence, breast reconstruction and other reconstructive surgeries using surgical mesh)

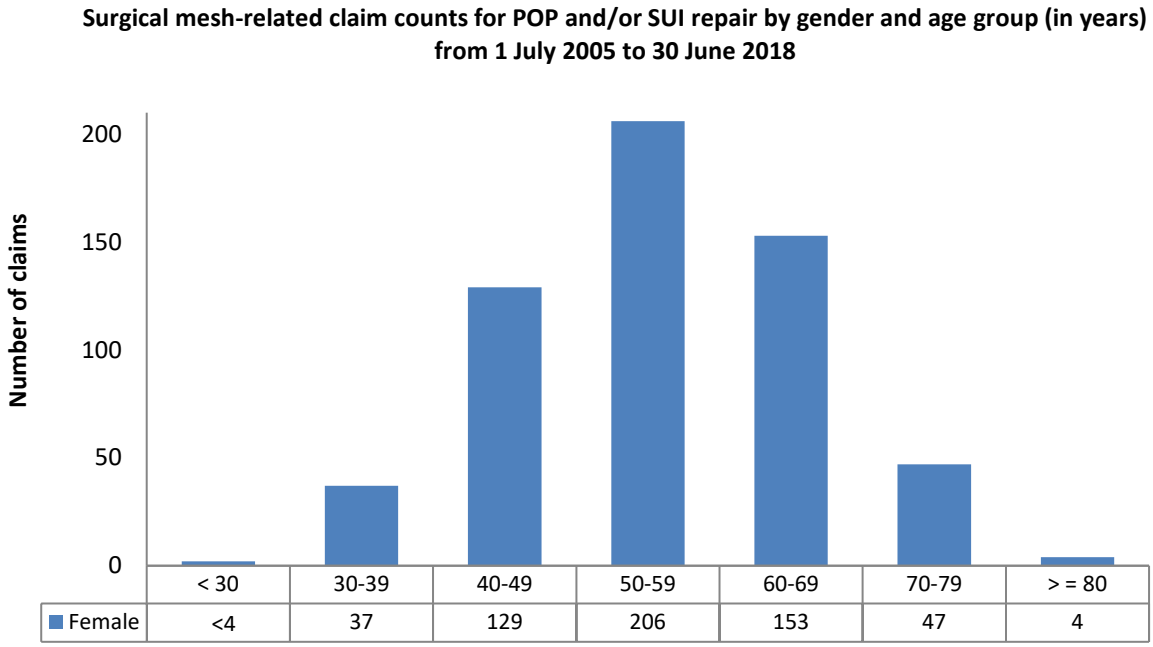
Of the 1,018 claims, 76% (n=770) relate to the female gender group and 24% (n=248) to the male gender group.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group and POP repair surgery type. The male VMR claims are grouped under 'Other' mesh surgery.

Of the 1,018 claims, 13 relate to female VMR and fewer than four claims relate to male VMR surgery.

Of the 375 hernia repair claims, there is almost a 50/50 split across the female and male gender groups for ventral hernia and other hernia repair claims. Whereas 83% (n=107) of groin hernia repairs relate to the male gender group.

Figure 6: Number of surgical mesh-related claims for POP and/or SUI repair by gender and age group



Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4"

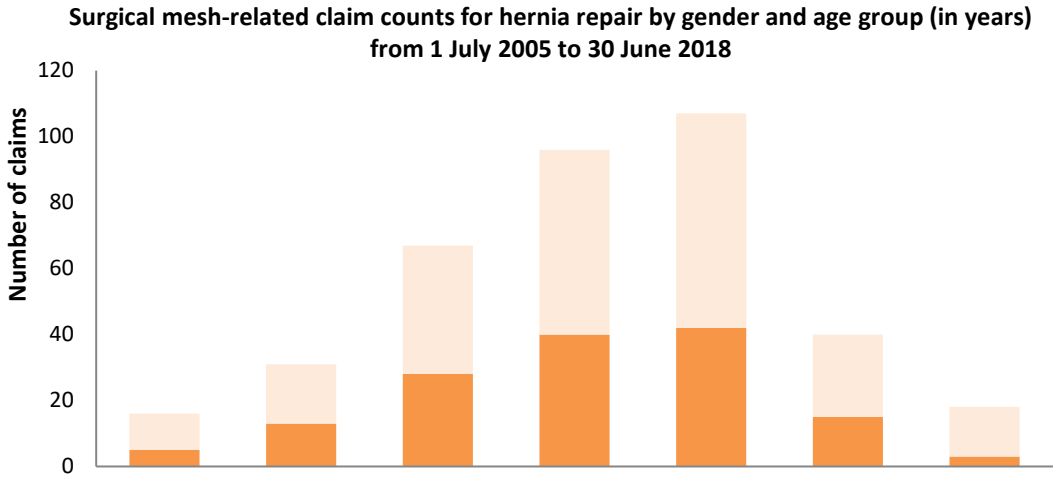
Figure 6 shows the 578 surgical mesh-related claims for POP and/or SUI repairs by gender and age group distribution. 100% of claims relate to the female gender group.

Of the 578 claims, noticeably the 50-59 age group have the highest number of claims (36%, n=206), followed closely by the 60-69 (26%, n=153) and then 40-49 (22%, n=129) age group.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group.

Of the 578 claims, 13 relate to female VMR. Claims relating to female Ventral Mesh Rectopexy (VMR) procedure is seen in almost all age groups except the >=80 age group. The numbers are all fewer than four for each age group.

Figure 7: Number of surgical mesh-related claims for hernia repair by gender and age group



	< 30	30-39	40-49	50-59	60-69	70-79	> = 80
Total decision	16	31	67	96	107	40	~17
Male	11	18	39	56	65	25	15
Female	5	13	28	40	42	15	<4

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To provide approximate totals, "<4" is assumed as 2.

Figure 7 shows the 375 surgical mesh-related claims for hernia repair by gender and age group distribution.

Of the 375 claims, noticeably the 60-69 years' age group have the highest number of claims (29%, n=107) both for the male (17%, n=65) and female (11%, n=42) gender group.

Claims are the highest for male clients across all age groups. This seems consistent with current knowledge about hernia development - that men are more likely to develop a hernia (in particular the groin hernia) and more likely to need a hernia repair compared with women[7].

[7] Brooks, D. C., Obeid, A., & Hawn, M. (2014). Classification, clinical features and diagnosis of inguinal and femoral hernias in adults. UpToDate. Waltham, MA: UpToDate.

Figure 8: Number of surgical mesh-related claims for hernia repair by gender and surgery type

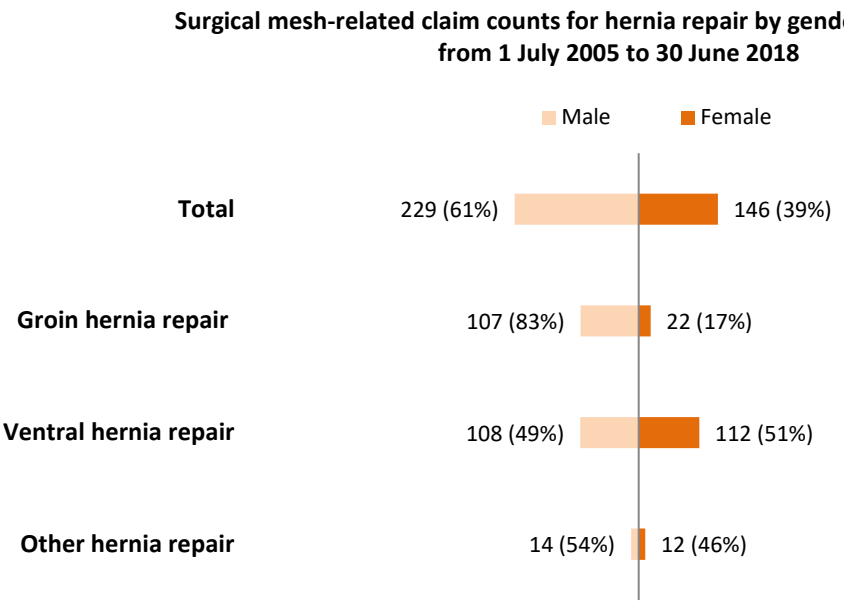


Figure 8 shows the breakdown of the 375 surgical mesh-related claims for hernia repair by gender and surgery type (type of hernia repair).

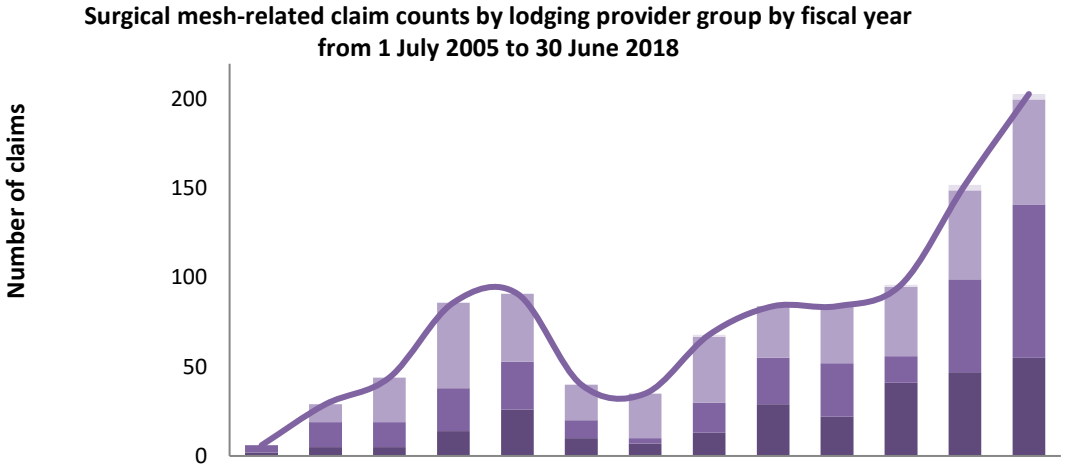
ACC data has identified three main surgery types for hernia repair, which are:

1. Groin hernia repair
2. Ventral hernia repair
3. 'Other' hernia repair (This includes hiatus hernia, perineal hernia, parastomal hernia or the hernia type is unknown).

Of the 375 claims, the number of groin hernia repairs is higher (83%, n=107) in the male gender group than that of females (17%, n=22), while the number of ventral hernia repairs is almost the same between male (49%, n=108) and female (51%, n=112).

3. Who is lodging surgical mesh-related claims?

Figure 9: Number of surgical mesh-related claims by lodging provider group by fiscal year



	2005 /06	2006 /07	2007 /08	2008 /09	2009 /10	2010 /11	2011 /12	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18
Other	0	0	0	0	0	0	0	<4	0	0	<4	<4	<4
Private Clinic or Hospital	0	10	25	48	38	20	25	37	29	32	39	50	59
GP	4	14	14	24	27	10	<4	17	26	30	15	52	86
DHB	<4	5	5	14	26	10	7	13	29	22	41	47	55
Total	~6	29	44	86	91	40	~34	~69	84	84	~97	~151	~202

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To provide approximate totals, "<4" is assumed as 2.

Figure 9 shows the 1,018 surgical mesh-related claims by lodging provider group by fiscal year.

Of the 1,018 claims, 40% (n=412) are lodged by Private Clinics & Hospitals, 31% (n=322) are lodged by GPs and 27% (n=276) are lodged by DHBs. 'Other' includes e.g. Ambulance, Community Clinics or providers not listed.

Noticeably the GP group has lodged more claims than other provider groups since 2016/17.

Of the 203 claims in 2017/18, 42% (n=86) are lodged by GPs. The claims lodged by GPs increased by 37 from 2015/16 to 2016/17, and again by 34 from 2016/17 to 2017/18.

There are several reasons for this increase as noted in Figure 2, one being, the media and the health sector's attention on surgical mesh both in NZ and overseas. In addition, ACC made a commitment to the Mesh Down Under group to enhance GPs knowledge about the complications relating to surgical mesh by drawing their attention to the ACC surgical mesh review and the ongoing claim data updates. The expected outcome was that GPs may recognise possible complications from surgical mesh and lodge claims earlier. Anecdotally we understand that more clients are also asking to have their claims lodged for ACC to assess.

Figure 10: Number of surgical mesh-related claims by accepts/declines by lodging providers

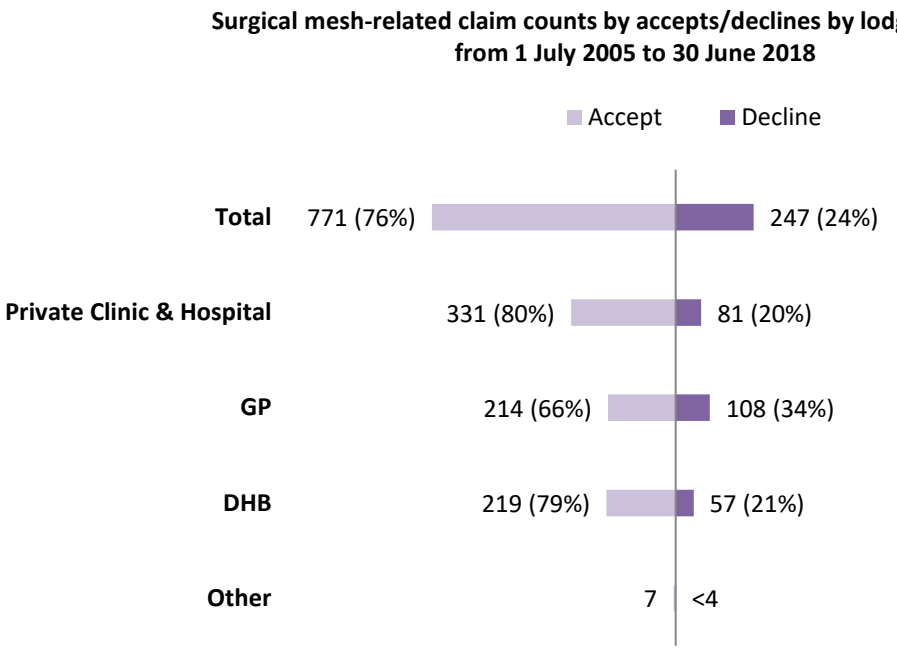


Figure 10 shows the 1,018 surgical mesh-related claims by lodging provider group by accepts and declines.

Of the 1,018 claims, 40% (n=412) are lodged by a Private Clinics & Hospitals, 31% (n=322) are lodged by GPs and 27% (n=276) are lodged by DHBs. 'Other' includes e.g. Ambulance, Community Clinics or providers not listed.

Of the 1,018 claims, the accept rate for claims lodged by GP is 66%. This is significantly[8] lower than the accept rate in claims lodged by Private Clinics & Hospitals (80%) and DHB (79%).

Claims lodged by GPs had the highest number of claims declined. This means that there are more claims lodged without the supporting clinical evidence e.g. evidence of a physical injury.

ACC will continue to talk to GPs and our other lodging providers to help them understand what clinical evidence is required when assessing a treatment injury claim.

See Table 2 for examples of the decline reasons.

It is important to note that when a claim has been declined, ACC can reassess the claim when new clinical evidence is provided which means the accept rate can change over time.

[8] The difference in accept rate among lodging provider groups (GP, DHB and Private Clinic & Hospital) is statistically significant ($\chi^2(2) = 21.7, p < 0.05$).

Table 7: Number of surgical mesh-related claims declined by lodging provider by fiscal year

Surgical mesh-related decline claim counts by lodging provider by fiscal year from 1 July 2005 to 30 June 2018				
Fiscal year	**DHB**	**GP**	**Private Clinic & Hospital**	**Other**
2005/06	0 (0%)	<4 (-%)	0 (0%)	0 (0%)
2006/07	<4 (-%)	<4 (-%)	<4 (-%)	0 (0%)
2007/08	<4 (-%)	<4 (-%)	<4 (-%)	0 (0%)
2008/09	<4 (-%)	7 (41%)	9 (53%)	0 (0%)
2009/10	<4 (-%)	5 (22%)	15 (65%)	0 (0%)
2010/11	<4 (-%)	<4 (-%)	5 (50%)	0 (0%)
2011/12	<4 (-%)	0 (0%)	<4 (-%)	0 (0%)
2012/13	<4 (-%)	6 (50%)	4 (33%)	0 (0%)
2013/14	6 (27%)	10 (45%)	6 (27%)	0 (0%)
2014/15	<4 (-%)	11 (73%)	<4 (-%)	0 (0%)
2015/16	4 (24%)	7 (41%)	6 (35%)	0 (0%)
2016/17	9 (21%)	20 (48%)	13 (31%)	0 (0%)
2017/18	23 (31%)	34 (45%)	17 (23%)	<4 (-%)
Total	**57 (~23%)**	**108 (~44%)**	**81 (~33%)**	**~2 (~1%)**

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4(-%)". To provide approximate percentages and totals, "<4" is assumed as 2.

Table 7 shows the 247 surgical mesh-related claims declined by lodging provider by fiscal year.

Of the 247 declined claims, 44% (n=108) are lodged by GPs, 33% are lodged by Private Clinics & Hospitals and 23% are lodged by DHBs. Claims lodged by GPs have a higher number of claims declined than other lodging provider groups.

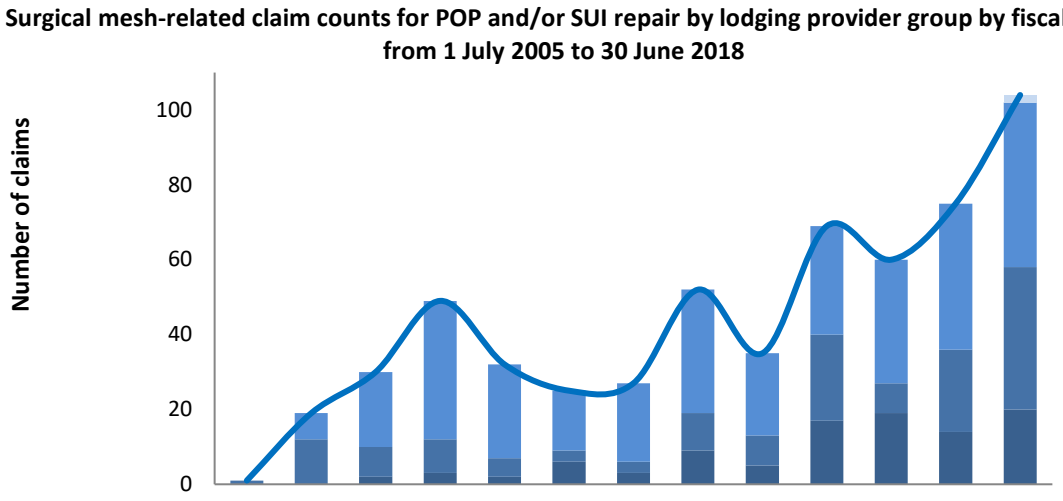
In 2016/17 and 2017/18; claims lodged by GPs have the highest number of claims declined for these years. In 2017/18 there is also an increase in the proportion of declines for claims lodged by DHBs.

This means that there are more claims lodged without the supporting clinical evidence e.g. evidence of a physical injury.

See Table 2 for examples of the decline reasons.

It is important to note that when a claim has been declined, ACC can reassess the claim when new clinical evidence is provided which means the accept rate can change over time.

Figure 11: Number of surgical mesh-related claims for POP and/or SUI repair by lodging provider group by fiscal year



	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Other	0	0	0	0	0	0	0	0	0	0	0	0	<4
Private Clinic or Hospital	0	7	20	37	25	16	21	33	22	29	33	39	44
GP	<4	12	8	9	5	<4	<4	10	8	23	8	22	38
DHB	0	0	<4	<4	<4	6	<4	9	5	17	19	14	20
Total	~2	19	~30	~48	~32	~24	~25	52	35	69	60	75	~104

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To provide approximate totals, "<4" is assumed as 2.

Figure 11 shows the 578 surgical mesh-related claims for POP and/or SUI repair by lodging provider group by fiscal year.

Private Clinics & Hospitals lodged most of the POP and/or SUI repair claims across all fiscal years.

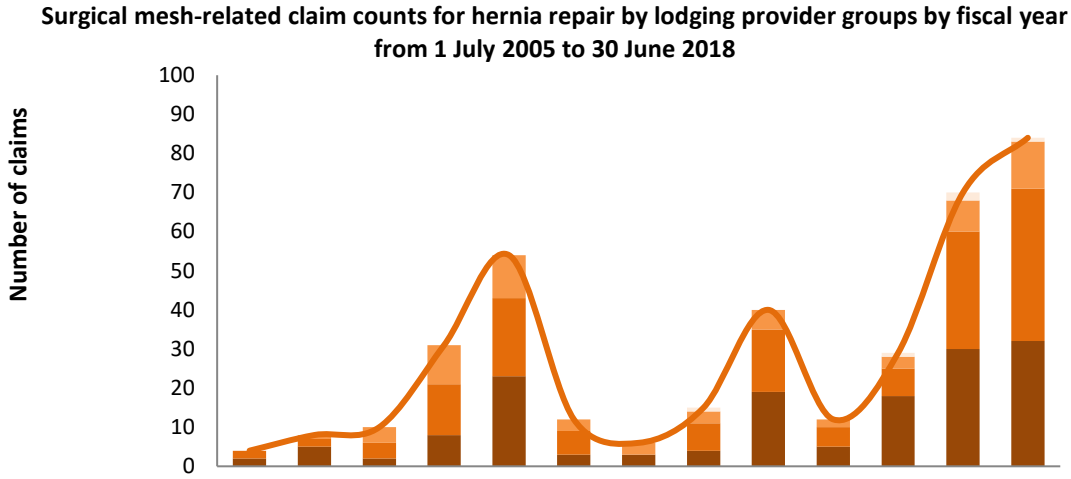
Of the 578 claims for POP and/or SUI repair, 56% (n=326) of claims are lodged by Private Clinics & Hospitals, 26% (n=150) are lodged by GPs and 17% (n=100) are lodged by DHBs. 'Other' includes e.g. Ambulance, Community Clinics or providers not listed.

Noticeably the claims lodged by GPs increase by 14 (from eight to 22) from 2015/16 to 2016/17, and again by 16 (from 22 to 38) from 2016/17 to 2017/18.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group.

Of the 578 claims, 13 relate to female VMR. Of the 13 claims, seven (54%) are lodged by GPs.

Figure 12: Number of surgical mesh-related claims for hernia repair by lodging provider group by fiscal year



	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Other	0	0	0	0	0	0	0	<4	0	0	<4	<4	<4
Private Clinic or Hospital	0	<4	4	10	11	<4	<4	<4	5	<4	<4	8	12
GP	<4	<4	4	13	20	6	0	7	16	5	7	30	39
DHB	<4	5	<4	8	23	<4	<4	4	19	5	18	30	32
Total	~4	~9	~10	31	54	~10	~4	~15	40	~12	~29	~70	~85

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To provide approximate totals, "<4" is assumed as 2.

Figure 12 shows the 375 surgical mesh-related claims for hernia repair by lodging provider groups by fiscal year.

Overall, DHBs lodged most of the hernia repair claims across all fiscal years, followed closely by GPs. 'Other' includes e.g. Ambulance, Community Clinics or providers not listed.

Of the 375 claims for hernia repair, 41% (n=154) of claims are lodged by DHBs, 40% (n=151) are lodged by GPs and 17% (n=65) are lodged by Private Clinics & Hospitals.

There is a significant increase in claims lodged by GPs, DHBs and Private Clinics & Hospitals since 2015/16.

When comparing 2015/16 to 2016/17, claims lodged by GPs increase by 23 (from seven to 30) and DHBs by 12 (from 18 to 30).

GPs lodged the most claims in 2017/18.

4. What is the breakdown of surgical mesh-related claims by treatment context by event (surgery type groups)?

Table 8: Number of surgical mesh-related claims by treatment context by surgery type groups

Surgical mesh-related claim counts by treatment context by surgery type groups from 1 July 2005 to 30 June 2018							
All		**POP and/or SUI repair**		**Hernia repair surgery**		**Other mesh surgery**	
Treatment Context	**n**	**Treatment Context**	**n**	**Treatment Context**	**n**	**Treatment Context**	**n**
Gynaecology	520	Gynaecology	513	General Surgery	373	General Surgery	28
General Surgery	414	Urology	52	Other contexts	<4	Plastic And Burns	18
Urology	58	General Surgery	13			Gynaecology	7
Plastic And Burns	18					Other contexts	7
Other contexts	8					Urology	5

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4"

Table 8 shows the 1,018 surgical mesh-related claims by treatment context by surgery type groups.

Treatment context is defined as the over-arching type of treatment that the patient is receiving when the injury occurred.

ACC data has identified three main surgery type groups for the surgical mesh-related claims, which are:

1. Pelvic Organ Prolapse (POP) and/or Stress Urinary Incontinence (SUI) repair
2. Hernia repair
3. 'Other' mesh surgery (This includes mesh removal surgery, sling surgery for male urinary incontinence, breast reconstruction and other reconstructive surgeries using mesh)

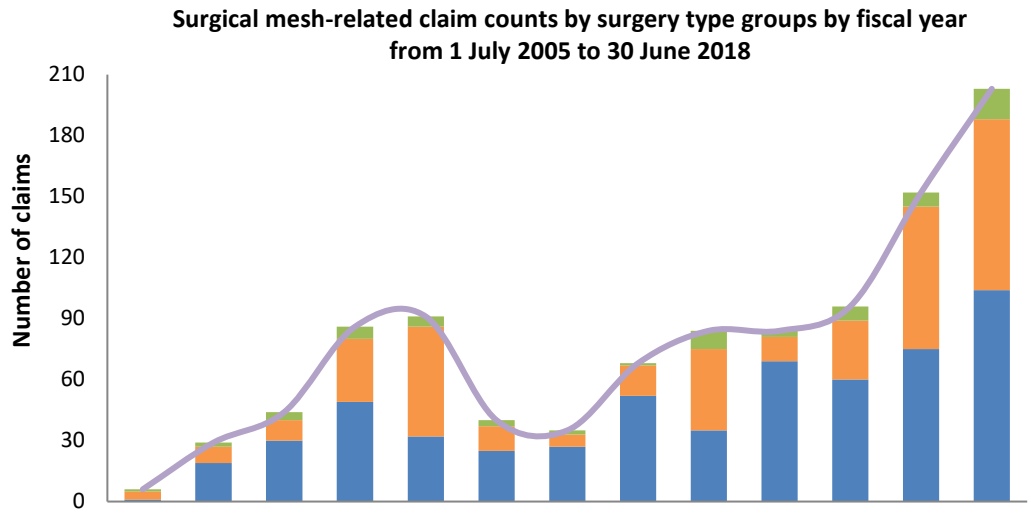
Of the 1,018 claims, 51% (n=520) of claims relate to the Gynaecology treatment context and 41% (n=414) relate to the General Surgery treatment context. Urology accounts for around 6% (n=58) of all surgical mesh-related claims, followed by Plastic and Burns 2% (n=18) and other contexts 1% (n=8). 'Other' mesh surgery contexts include dental, orthopaedic, vascular surgery, ophthalmology, cardiothoracic and oncology.

ACC does not collect data specifically relating to the colorectal surgery treatment context. If the surgery is performed by a colorectal surgeon, the treatment context would be captured under General Surgery. For example, Ventral Mesh Rectopexy (VMR) which is a surgical treatment for posterior compartment pelvic organ prolapse, is commonly performed by a colorectal surgeon and is captured under General Surgery.

VMR has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group and male VMR are reported under 'Other' mesh surgery.

The 13 claims under POP and/or SUI repair with General Surgery treatment context all relate to female VMR. Fewer than four claims under 'Other' mesh surgery relate to male VMR.

Figure 13: Number of surgical mesh-related claims by surgery type groups by fiscal year



	2005 /06	2006 /07	2007 /08	2008 /09	2009 /10	2010 /11	2011 /12	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18
Other mesh surgery	<4	<4	4	6	5	<4	<4	<4	9	<4	7	7	15
Hernia repair	4	8	10	31	54	12	6	15	40	12	29	70	84
POP and/or SUI repair	<4	19	30	49	32	25	27	52	35	69	60	75	104
Total	~8	~29	44	86	91	~39	~35	~69	84	~83	96	152	203

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To provide approximate totals, "<4" is assumed as 2.

Figure 13 shows the 1,018 surgical mesh-related claims by surgery type groups.

ACC collects data relating to the injury and associated treatment events.

Treatment event is defined as the type of treatment procedure that caused the injury or symptom. For surgical mesh-related claims, treatment event refers to the mesh surgery type that caused the injury or symptom.

ACC data has identified three main groups of surgery types for the surgical mesh-related claims, which are:

1. Pelvic Organ Prolapse (POP) and/or Stress Urinary Incontinence (SUI) repair
2. Hernia repair
3. 'Other' mesh surgery (This includes mesh removal surgery, sling surgery for male urinary incontinence, breast reconstruction and other reconstructive surgeries using mesh)

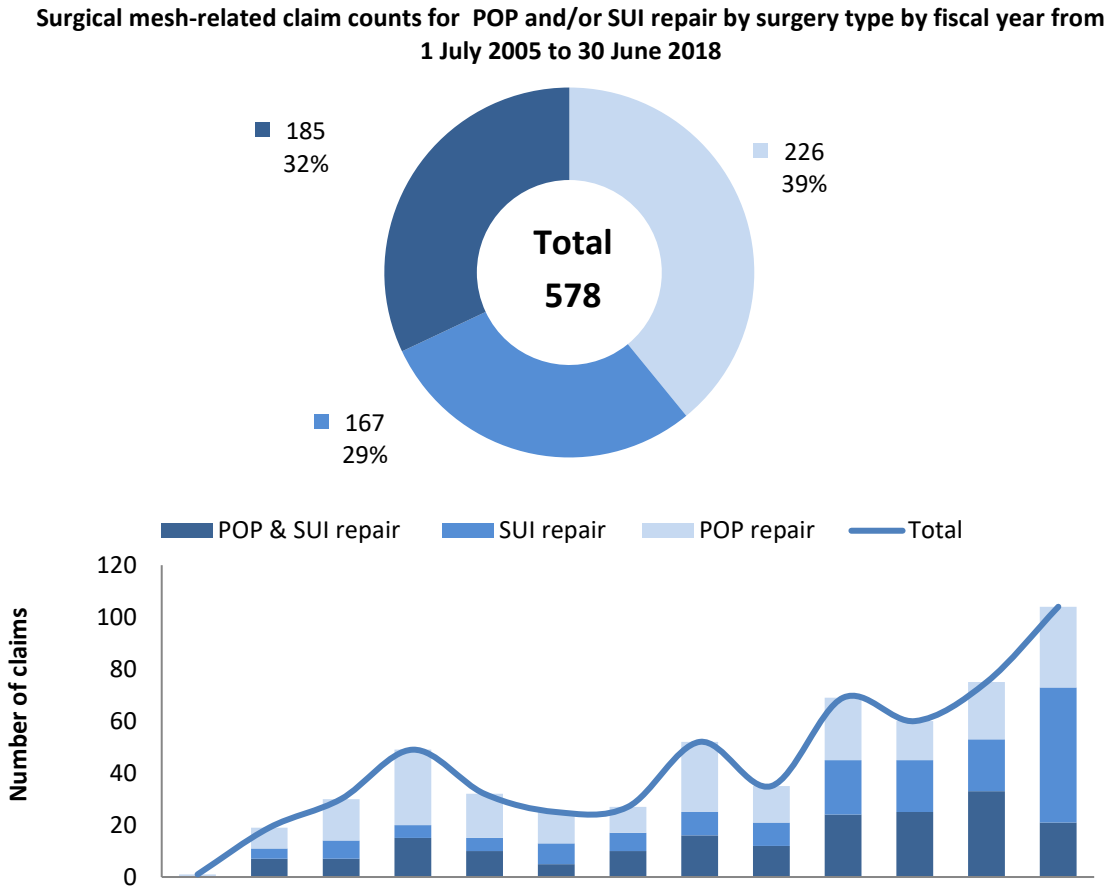
Of the 1,018 claims, the most significant increase is in 2016/17 and relates to hernia repair surgery. Hernia repair claims increase by 20% (n=14) in 2017/18 compared to the year before.

Claims relating to POP and/or SUI repair surgery increase by 39% (n=29) in 2017/18 compared to the previous year.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group and the male VMR claims are reported under 'Other' mesh surgery.

Of the 1,018 claims, 13 relate to female VMR and fewer than four claims relate to male VMR surgery. The earliest decision relating to female VMR is in 2008/09. Of the 13 claims relating to female VMR, 38% (n=5) are decided in 2017/18.

Figure 14: Number of surgical mesh-related claims for POP and/or SUI repair by surgery type by fiscal year



	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
POP repair	<4	8	16	29	17	12	10	27	14	24	15	22	31
SUI repair	0	4	7	5	5	8	7	9	9	21	20	20	52
POP & SUI repair	0	7	7	15	10	5	10	16	12	24	25	33	21
Total	~2	19	30	49	32	25	27	52	35	69	60	75	104

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To provide approximate totals, "<4" is assumed as 2.

Figure 14 shows the 578 surgical mesh-related claims for POP and/or SUI repair by surgery type by fiscal year.

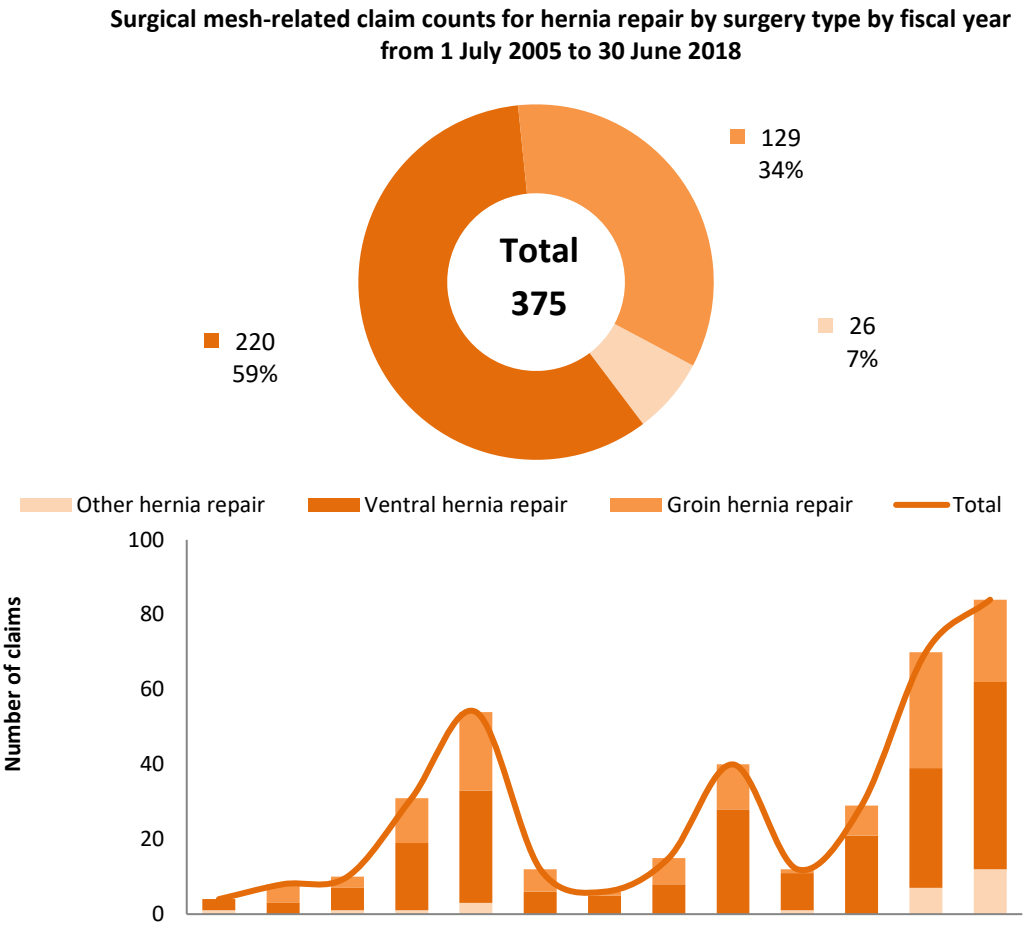
ACC data has identified three main surgery types for POP and/or SUI repair which are:

1. Pelvic Organ Prolapse (POP)
2. Stress Urinary Incontinence (SUI) repair
3. Combined Pelvic Organ Prolapse & Stress Urinary Incontinence (POP & SUI) repair (NOTE: Combined POP & SUI repair refers to one single claim for one surgical event to treat both POP and SUI

Of the 578 claims, POP repair has the highest number of claims (39%, n=226) among the three surgery types. Of the 104 decided claims in 2017/18, 50% (n=52) relate to SUI repair which is a 160% increase compared to the previous year.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group and POP repair surgery type. Of the 578 claims, 13 relate to female VMR. The earliest decision relating to female VMR is in 2008/09. Of the 13 claims relating to female VMR, 38% (n=5) are decided in 2017/18.

Figure 15: Number of surgical mesh-related claims for hernia repair by surgery type by fiscal year



	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Groin hernia repair	0	5	<4	12	21	6	<4	7	12	<4	8	31	22
Ventral hernia repair	<4	<4	6	18	30	6	5	8	28	10	21	32	50
Other hernia repair	<4	0	<4	<4	<4	0	0	0	0	<4	0	7	12
Total	~4	~7	~10	~32	~53	12	~7	15	40	~14	29	70	84

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To provide approximate totals, "<4" is assumed as 2.

Figure 15 shows the 375 surgical mesh-related claims for hernia repair by surgery type by fiscal year.
ACC data has identified three main surgery types for hernia repair, which are:

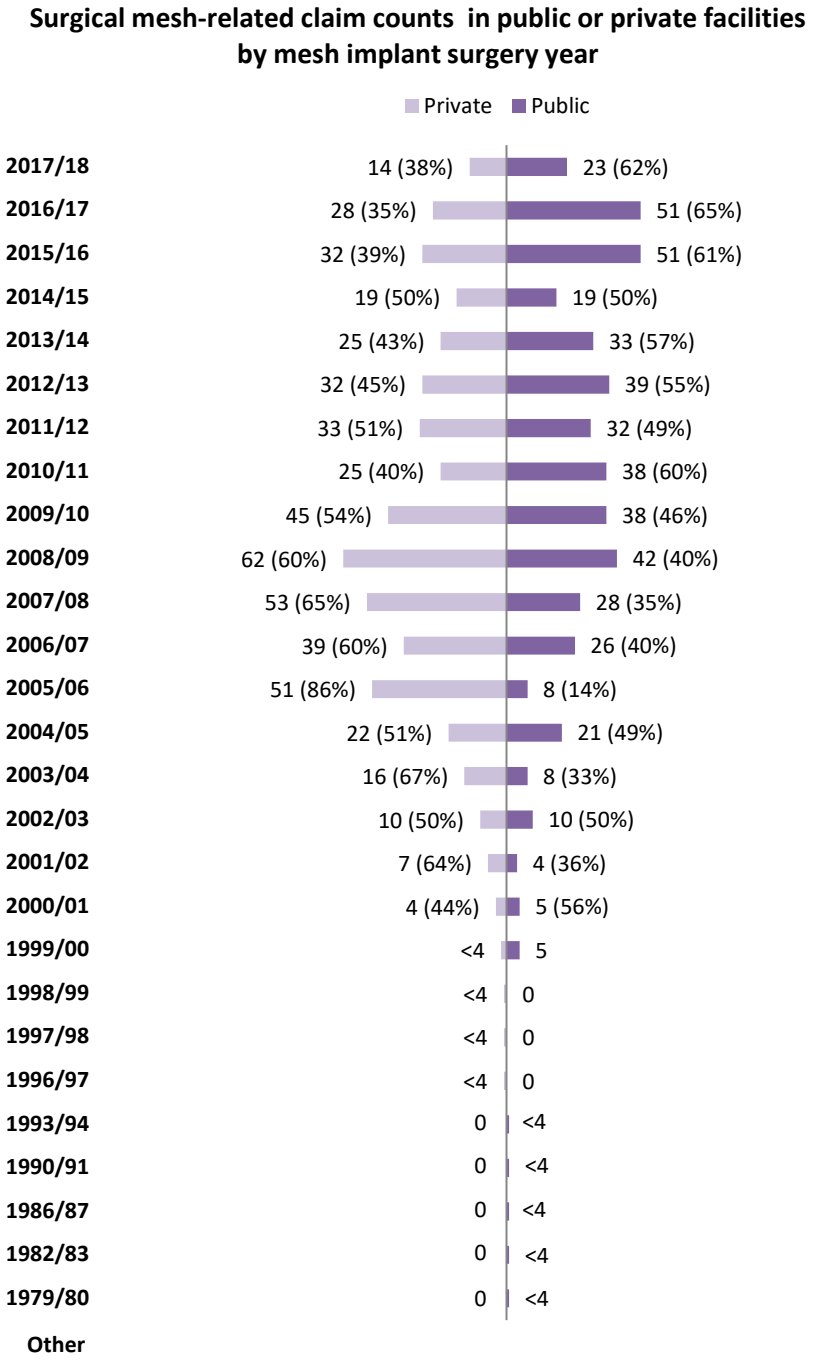
1. Groin hernia repair
2. Ventral hernia repair
3. 'Other' hernia repair (This includes hiatus hernia, perineal hernia, parastomal hernia or the hernia type is unknown).

Of the 375 claims, ventral hernia repair has the highest number of claims (59%, n=220) among the three surgery types.

Since 2013/14 ventral hernia repairs represent the highest claim count. In 2017/18 there is an increase of 56% (n=18) in ventral hernia repair and 71% (n=5) in 'Other' hernia repair compared to 2016/17. Groin hernia repair decreases by 29% from 31 claims in 2016/17 to 22 claims in 2017/18.

5. Where are the surgical mesh-related events occurring?

Figure 16: Number of claims for surgical mesh-related events in public or private facilities by mesh implant surgery year

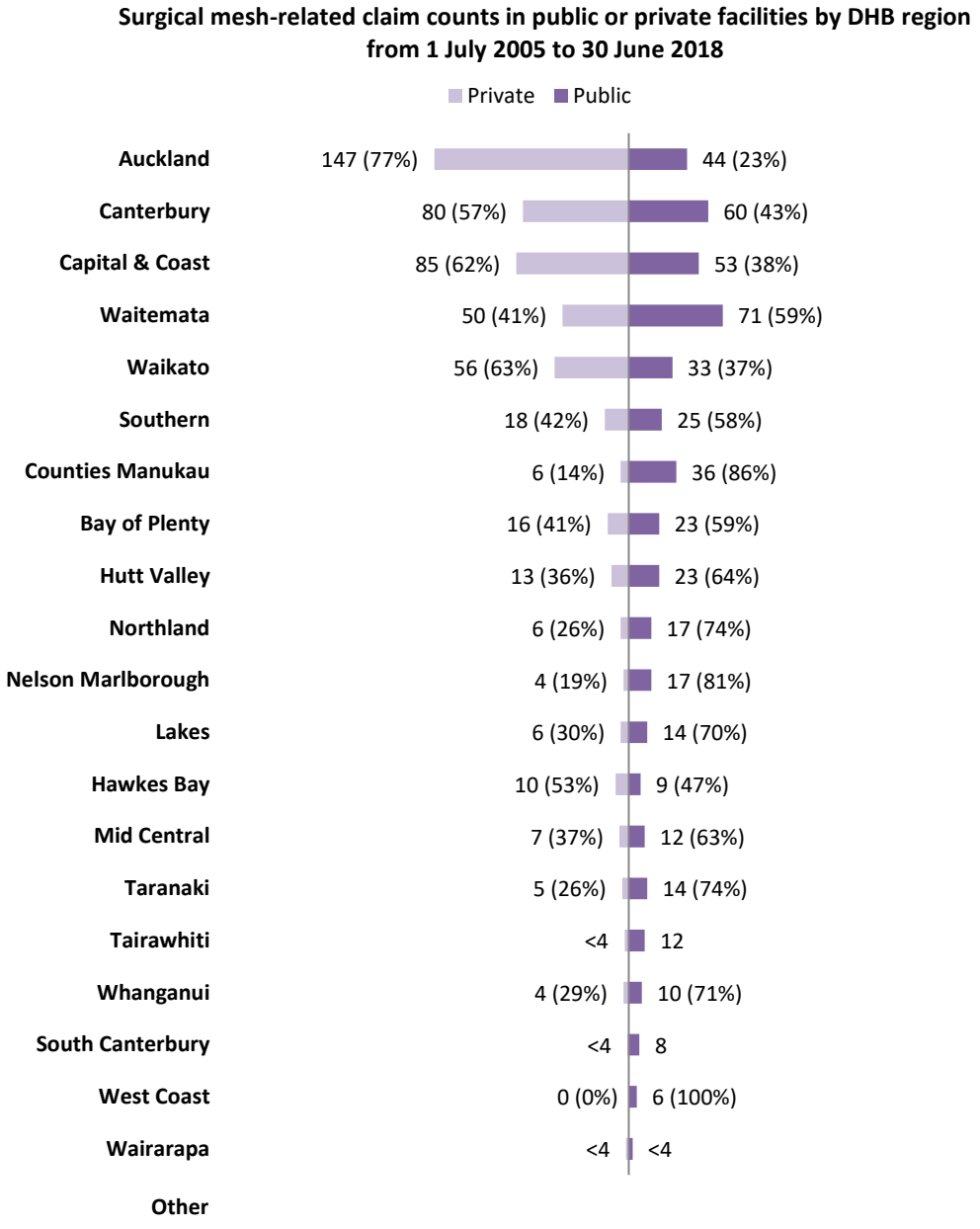


Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4"; percentages are not provided for the years with "<4" value.

Figure 16 shows the 1,018 surgical mesh-related events in private or public facilities (where the surgery occurred) by surgery year. 'Other' includes 10 claims where either the surgery year or the facility is unknown.

The 2008/09 surgery year has the highest claim count (n=62) for private facilities. From 2011/12 to 2013/14 the claim counts are somewhat evenly spread across both private and public facilities. Since 2015/16, there are more than 60% of claims relating to surgery in the public sector.

Figure 17: Number of claims for surgical mesh-related events in public or private facilities by DHB region



Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4"; percentages are not provided for the regions with "<4" value.

Figure 17 shows the 1,018 surgical mesh-related events in private or public facilities (where the surgery occurred) by DHB region. 'Other' includes 9 claims where either the facility is overseas or unknown.

Of the 1,018 claims, Auckland DHB region has the highest claim count (n=191) and most of these events (77%, n=147) occurred in private facilities. Canterbury DHB region has the second highest claim count (n=140) followed by Capital & Coast DHB region (n=138). 62% (n=85) of the surgical mesh-related events in Capital & Coast DHB region occurred in private facilities. While Waitemata DHB region has the highest count of events (59%, n=71) in public facilities.

The DHB region is a geographic area where the treating facility is located; it includes the public facilities and private facilities within the same region. Population numbers in different regions and facility types will play a key part in the number and type of surgeries performed. Higher and lower level tertiary facilities are represented in the top five.

Table 9: Number of claims for surgical mesh-related events by DHB regions by surgery type groups

Surgical mesh-related claim counts by DHB regions by surgery type groups from 1 July 2005 to 30 June 2018						
DHB regions	POP and/or SUI repair		Hernia repair		Other mesh surgery	
	n	% Region	n	% Region	n	% Region
Auckland	131	69%	48	25%	12	6%
Canterbury	84	60%	49	35%	7	5%
Capital & Coast	105	76%	26	19%	7	5%
Waitemata	68	56%	48	40%	5	4%
Waikato	43	48%	36	40%	10	11%
Southern	19	44%	21	49%	<4	-%
Counties Manukau	15	36%	24	57%	<4	-%
Bay of Plenty	24	62%	13	33%	<4	5%
Hutt Valley	17	47%	14	39%	5	14%
Northland	8	35%	11	48%	4	17%
Nelson Marlborough	12	57%	9	43%	0	0%
Lakes	7	35%	12	60%	<4	5%
Taranaki	<4	-%	13	68%	<4	-%
Mid Central	8	42%	10	53%	<4	-%
Hawkes Bay	10	53%	9	47%	0	0%
Tairawhiti	<4	-%	12	80%	0	0%
Whanganui	7	50%	6	43%	<4	-%
South Canterbury	4	44%	5	56%	0	0%
West Coast	<4	-%	<4	-%	<4	-%
Wairarapa	0	0%	5	100%	0	0%
Other	7	78%	<4	-%	0	0%

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4 (-%)". %Region is calculated across each Region.

Table 9 shows the 1,018 surgical mesh-related events by DHB region (where the surgery occurred) by surgery type groups. 'Other' includes nine claims where either the facility is overseas or unknown.
ACC data has identified three main surgery type groups for the surgical mesh-related claims, which are:

1. Pelvic Organ Prolapse (POP) and/or Stress Urinary Incontinence (SUI) repair
2. Hernia repair
3. 'Other' mesh surgery (This includes mesh removal surgery, sling surgery for male urinary incontinence, breast reconstruction and other reconstructive surgeries using mesh)

Of the 1,018 claims, Auckland DHB region shows the highest claim count (n=131) for POP and/or SUI repair, while Canterbury DHB region shows the highest claim count (n=49) relating to hernia repair.
Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group and the male VMR claims are reported under 'Other' mesh surgery. Of the 1,018 claims, 13 relate to female VMR and fewer than four claims relate to male VMR surgery. The majority of the 13 claims relate to treatment provided in the Auckland and Waikato DHB regions.

The DHB region is a geographic area where the treating facility is located; it includes the DHB facilities and private facilities within the same region. Population numbers in different regions and facility types will play a key part in the number and type of surgeries performed.

Figure 18: Number of claims for surgical mesh-related events in public or private facilities by surgery type groups

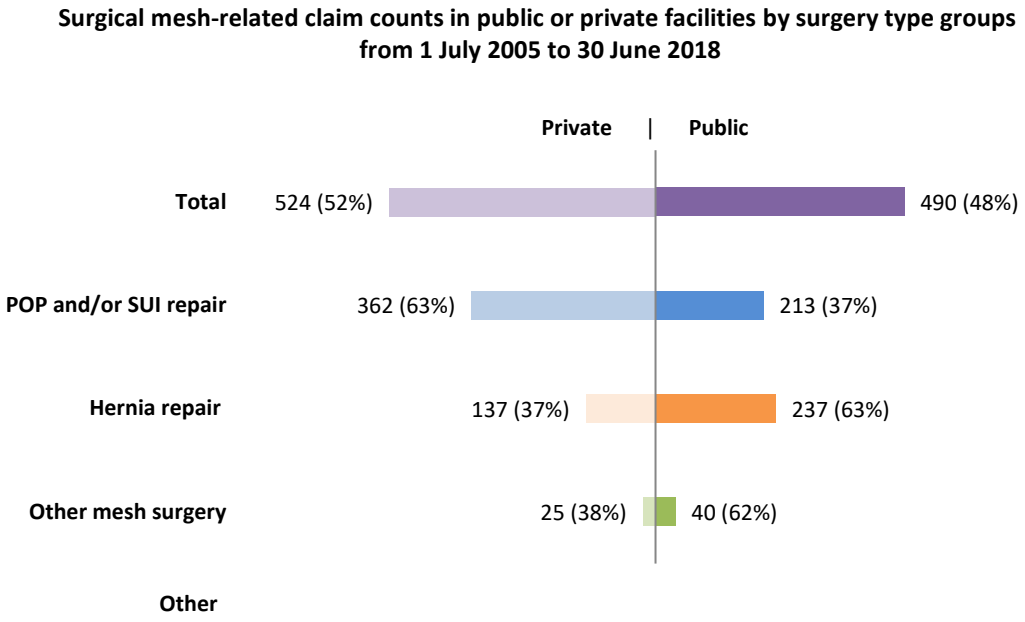


Figure 18 shows the 1,018 surgical mesh-related events in public or private facilities (where the mesh surgery occurred) by surgery type groups. 'Other' includes four claims where the facility is unknown.

ACC data has identified three main surgery type groups for the surgical mesh-related claims, which are:

1. Pelvic Organ Prolapse (POP) and/or Stress Urinary Incontinence (SUI) repair
2. Hernia repair
3. 'Other' mesh surgery (This includes mesh removal surgery, sling surgery for male urinary incontinence, breast reconstruction and other reconstructive surgeries using mesh)

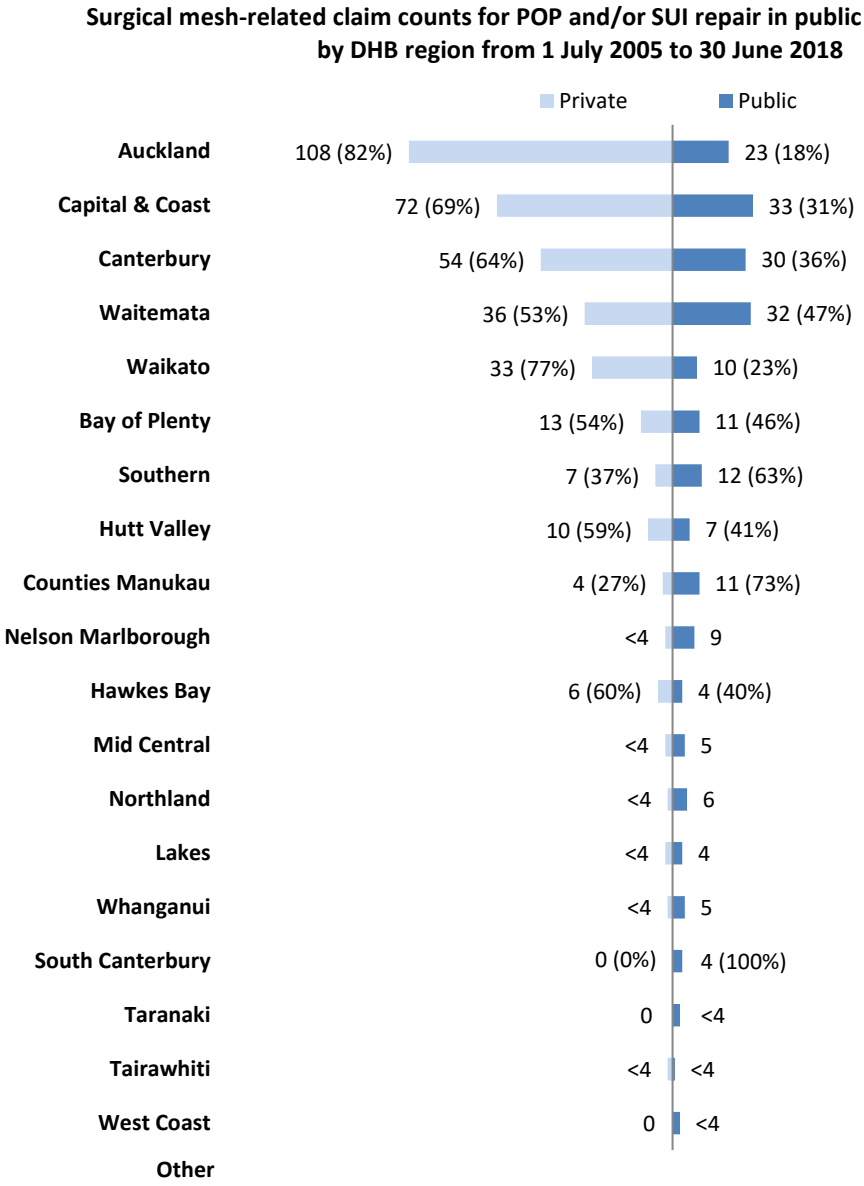
Of the 1,018 claims, 52% (n=524) of the events occurred in private facilities and 48% (n=490) in a public facility.

For the POP and/or SUI repair events, 63% (n=362) occurred in private facilities, while 63% (n=237) of the hernia repair events, occurred in a public facility.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. Of the 1,018 claims, 13 relate to female VMR and fewer than four claims relate to male VMR surgery. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group and the male VMR claims are reported under 'Other' mesh surgery.

Of the 13 claims relating to female VMR, 46% (n=6) of the events occurred in private facilities and 54% (n=7) occurred in a public facility.

Figure 19: Number of claims for surgical mesh-related events for POP and/or SUI repair in public or private facilities by DHB region



Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4" and percentages are not provided for "<4". %Region is calculated across each Region.

Figure 19 shows the 578 surgical mesh-related events for POP and/or SUI repair in a public or private facility (where the mesh surgery occurred) by DHB region. 'Other' includes seven claims where either the facility is overseas or unknown.

Of the 578 claims for POP and/or SUI repairs, 63% (n=362) of the events occurred in private facilities – see Figure 18. The highest claim counts are for the Auckland DHB region with 131 (23%), followed by Capital & Coast DHB region with 105 (18%). Most of the events in DHB regions occurred in private facilities, except for Counties Manukau DHB region.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group. Of the 578 claims, 13 relate to female VMR. Of the 13 claims relating to female VMR, 46% (n=6) of the events occurred in private facilities and 54% (n=7) occurred in a public facility.

The DHB region is a geographic area where the treating facility is located; it includes the DHB facilities and private facilities within the same region. Population numbers in different regions and facility types will play a key part in the number and type of surgeries performed.

Table 10: Number of claims for surgical mesh-related events for POP and/or SUI repair by DHB regions by surgery type

Surgical mesh-related claim counts for POP and/or SUI repair by DHB regions by surgery type from 1 July 2005 to 30 June 2018						
	POP repair		SUI repair		POP & SUI repair	
DHB regions	n	% Region	n	% Region	n	% Region
Auckland	52	40%	40	31%	39	30%
Capital & Coast	34	32%	20	19%	51	49%
Canterbury	37	44%	18	21%	29	35%
Waitemata	28	41%	18	26%	22	32%
Waikato	29	67%	<4	-%	11	26%
Bay of Plenty	8	33%	14	58%	<4	8%
Southern	4	21%	10	53%	5	26%
Hutt Valley	<4	-%	11	65%	<4	-%
Counties Manukau	8	53%	5	-%	<4	-%
Nelson Marlborough	<4	-%	7	58%	<4	-%
Hawkes Bay	6	60%	<4	-%	<4	-%
Mid Central	<4	-%	<4	-%	<4	-%
Northland	<4	-%	4	50%	<4	-%
Whanganui	<4	-%	<4	-%	<4	-%
Other	<4	-%	<4	-%	<4	-%
Lakes	<4	-%	<4	-%	<4	-%
South Canterbury	<4	-%	<4	-%	<4	-%
West Coast	<4	-%	0	0%	0	0%
Taranaki	0	0%	<4	-%	<4	-%
Other	<4	-%	<4	-%	<4	-%

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4 (-%)". %Region is calculated across each Region.

Table 10 shows the 578 surgical mesh-related events for POP and/SUI repair by DHB regions (where the mesh surgery occurred) by surgery type. 'Other' includes seven claims where either the facility is overseas or unknown.

ACC data has identified three main surgery types for POP and/or SUI repair which are:

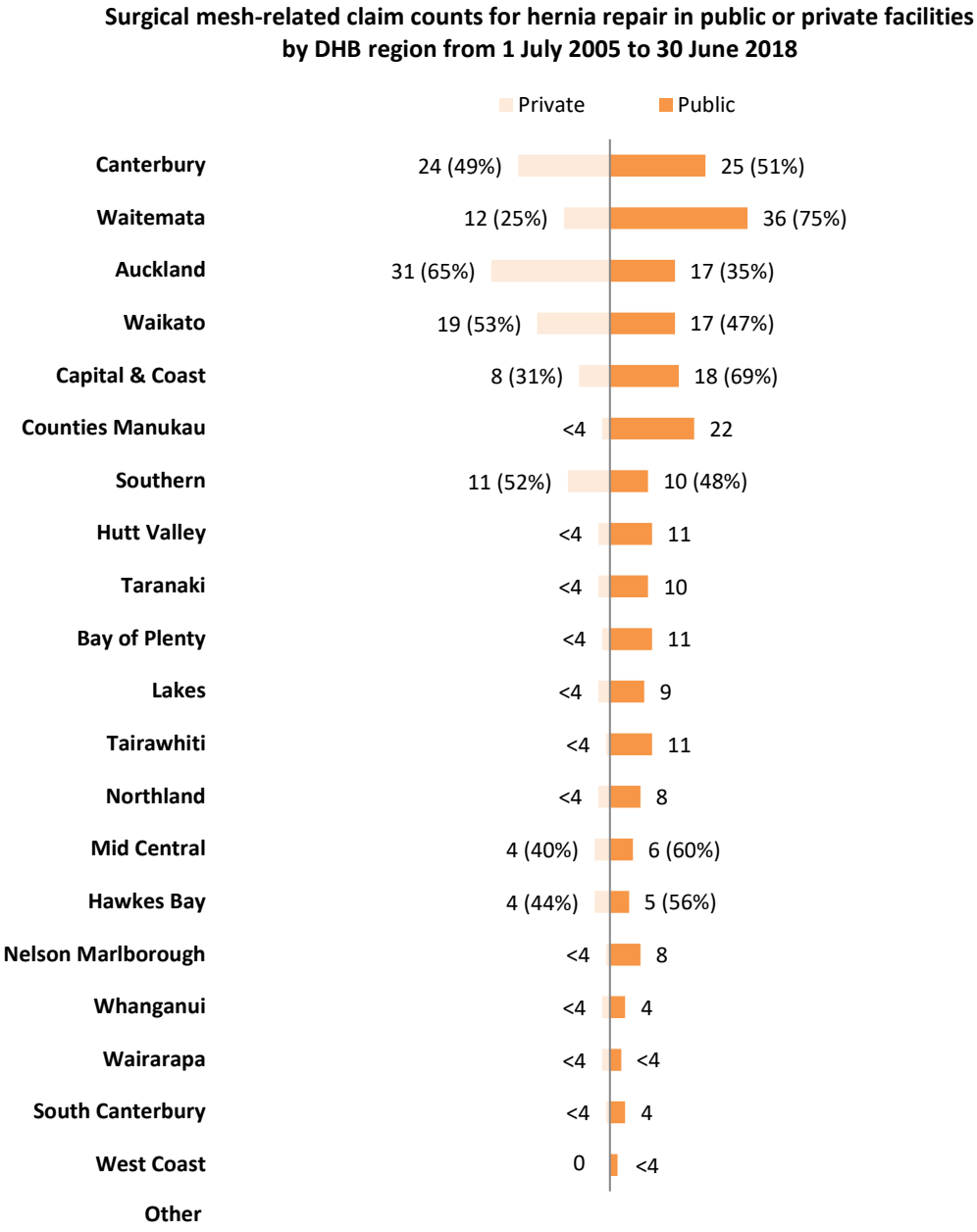
1. Pelvic Organ Prolapse (POP)
2. Stress Urinary Incontinence (SUI) repair
3. Combined Pelvic Organ Prolapse & Stress Urinary Incontinence (POP & SUI) repair (NOTE: Combined POP & SUI repair refers to one single claim for one surgical event to treat both POP and SUI

Of the 578 claims for POP and/or SUI repairs, most (67%, n=388) of the events are from treating facilities located in the Auckland, Capital & Coast, Canterbury and Waitemata DHB regions. Auckland DHB region shows the highest claim counts for POP repair, where Capital & Coast DHB region shows the highest claim counts for POP & SUI repair.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group. Of the 578 claims, 13 relate to female VMR and are reported under POP repair. The majority of the 13 claims relate to treatment provided in the Auckland and Waikato DHB regions.

The DHB region is a geographic area where the treating facility is located; it includes the DHB facilities and private facilities within the same region. Population numbers in different regions and facility types will play a key part in the number and type of surgeries performed.

Figure 20: Number of claims for surgical mesh-related events for hernia repair in public or private facilities by DHB region



Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4" and percentages are not provided for "<4". %Region is calculated across each Region

Figure 20 shows the 375 surgical mesh-related events for hernia repair in a public or private facility (where the mesh surgery occurred) by DHB region. 'Other' includes <4 claims where the facility is unknown.

Of the 375 claims for hernia repairs, 63% (n=237) of the events occurred in a public facility – see Figure 18. Most of the DHB regions' events occurred in public facilities, except Auckland and Southern DHB regions. The highest number of claims (10%, n=36) relating to hernia repair events occurred in a public facility in the Waitemata DHB region. The second highest claim count (8%, n=31) relating to hernia repair events occurred in private facilities in the Auckland DHB region.

The DHB region is a geographic area where the treating facility is located; it includes the DHB facilities and private facilities within the same region. Population numbers in different regions and facility types will play a key part in the number and type of surgeries performed.

Table 11: Number of claims for surgical mesh-related events for hernia repair by DHB region by surgery type

Surgical mesh-related claim counts for hernia repair by DHB region by surgery type from 1 July 2005 to 30 June 2018						
DHB regions	Groin hernia repair		Ventral hernia repair		Other hernia repair	
	n	% Region	n	% Region	n	% Region
Canterbury	16	33%	29	59%	4	8%
Auckland	18	38%	26	54%	4	8%
Waitemata	19	40%	27	56%	<4	-%
Waikato	12	33%	20	56%	4	11%
Capital & Coast	9	35%	17	65%	0	0%
Counties Manukau	<4	-%	20	83%	<4	-%
Southern	9	43%	11	52%	<4	-%
Hutt Valley	<4	-%	9	64%	<4	-%
Bay of Plenty	4	31%	8	62%	<4	-%
Taranaki	5	38%	7	54%	<4	-%
Tairawhiti	<4	-%	9	75%	<4	-%
Lakes	6	50%	6	50%	0	0%
Northland	4	36%	7	64%	0	0%
Mid Central	4	40%	6	60%	0	0%
Nelson Marlborough	5	56%	<4	-%	<4	-%
Hawkes Bay	4	44%	5	56%	0	0%
Whanganui	<4	-%	<4	-%	<4	-%
Wairarapa	<4	-%	<4	-%	0	0%
South Canterbury	<4	-%	<4	-%	0	0%
West Coast	0	0%	<4	-%	0	0%
Other	0	0%	<4	-%	<4	-%

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4 (-%)". %Region is calculated across each Region.

Table 11 shows the 375 surgical mesh-related events for hernia repair by DHB region (where the mesh surgery occurred) by surgery type. 'Other' includes <4 claims where the facility is unknown.

ACC data has identified three main surgery types for hernia repair, which are:

1. Groin hernia repair
2. Ventral hernia repair
3. 'Other' hernia repair (This includes hiatus hernia, perineal hernia, parastomal hernia or the hernia type is unknown).

Of the 375 claims for hernia repairs, the highest claim count of the ventral hernia repairs relates to treatment facilities located in the Canterbury DHB region (n=29), followed by Waitemata (n=27) and Auckland DHB (n=26) region. For groin hernia repairs, the highest claim count relates to treatment facilities located in the Waitemata DHB region, followed by Auckland and Canterbury DHB region.

The DHB region is a geographic area where the treating facility is located; it includes the DHB facilities and private facilities within the same region. Population numbers in different regions and facility types will play a key part in the number and type of surgeries performed.

6. What is the breakdown of surgical mesh-related claims by primary and secondary injury/symptoms?

Table 12: Number of surgical mesh-related claims by primary and secondary injury/symptom

Surgical mesh-related claim counts by primary and secondary injury/symptom from 1 July 2005 to 30 June 2018					
Primary injury/symptom	**n**	**%**	**Secondary injury/symptom**	**n**	**%**
Mesh erosion	375	37%	Infection	130	21%
Infection	216	21%	Pain	66	11%
Pain	69	7%	Sexual dysfunction	56	9%
Hernia	64	6%	Perineal injury	52	8%
Nerve injury	50	5%	Mesh erosion	44	7%
Haematoma	35	3%	Mesh migration	27	4%
Urinary tract injury	19	2%	Wound dehiscence	24	4%
Perineal injury	17	2%	Haematoma	23	4%
Mesh migration	17	2%	Hernia	21	3%
Seroma	15	1%	Vascular injury	19	3%
Gastrointestinal injury	14	1%	Fistula - other	15	2%
Bowel injury	14	1%	Seroma	15	2%
Fistula - other	12	1%	Scarring	13	2%
Sexual dysfunction	11	1%	Nerve injury	11	2%
Scarring	11	1%	Urinary tract injury	10	2%
Urinary Incontinence	8	<1%	Mesh contraction	9	1%
Mesh contraction	8	<1%	Tissue injury / damage	8	1%
Tissue injury / damage	7	<1%	Urinary Incontinence	8	1%
Urethral injury	6	<1%	Necrosis	7	1%
Wound dehiscence	6	<1%	Bowel injury	7	1%
Hydrocele	5	<1%	Gastrointestinal injury	5	<1%
Adhesions	4	<1%	Perforation - Other	5	<1%
Other 23 injuries/symptoms	35	3%	Failure internal staples / sutures	4	<1%
			Repeat treatment / surgery	4	<1%
			Urethral injury	4	<1%
			Other 19 injuries/symptoms	34	6%
Total	**1,018**	**100%**	**Total**	**621**	**100%**

Note: Percentages may not add to 100% due to rounding.

Table 12 shows the 1,018 surgical mesh-related claims by primary and secondary injury. Please note that a single claim can have one primary injury/symptom, but may have up to two or no secondary injuries/symptoms.

Of the 1,018 claims, mesh erosion (37%, n=375) and infection (21%, n=216) are the most common primary injuries. Infection (21%, n=130) is also the most common secondary injury, followed by symptom of pain (11%, n=66) and sexual dysfunction (9%, n=56).

Sexual dysfunction mostly relates to dyspareunia (painful sexual intercourse). Even though pain is not represented by high claim counts, this does not mean that pain isn't present. E.g. Mesh erosion may be the primary injury but pain is a key symptom.

Figure 21: Number of surgical mesh-related claims by surgery type groups, surgery type and primary injury or symptom from 1 July 2005 to 30 June 2018

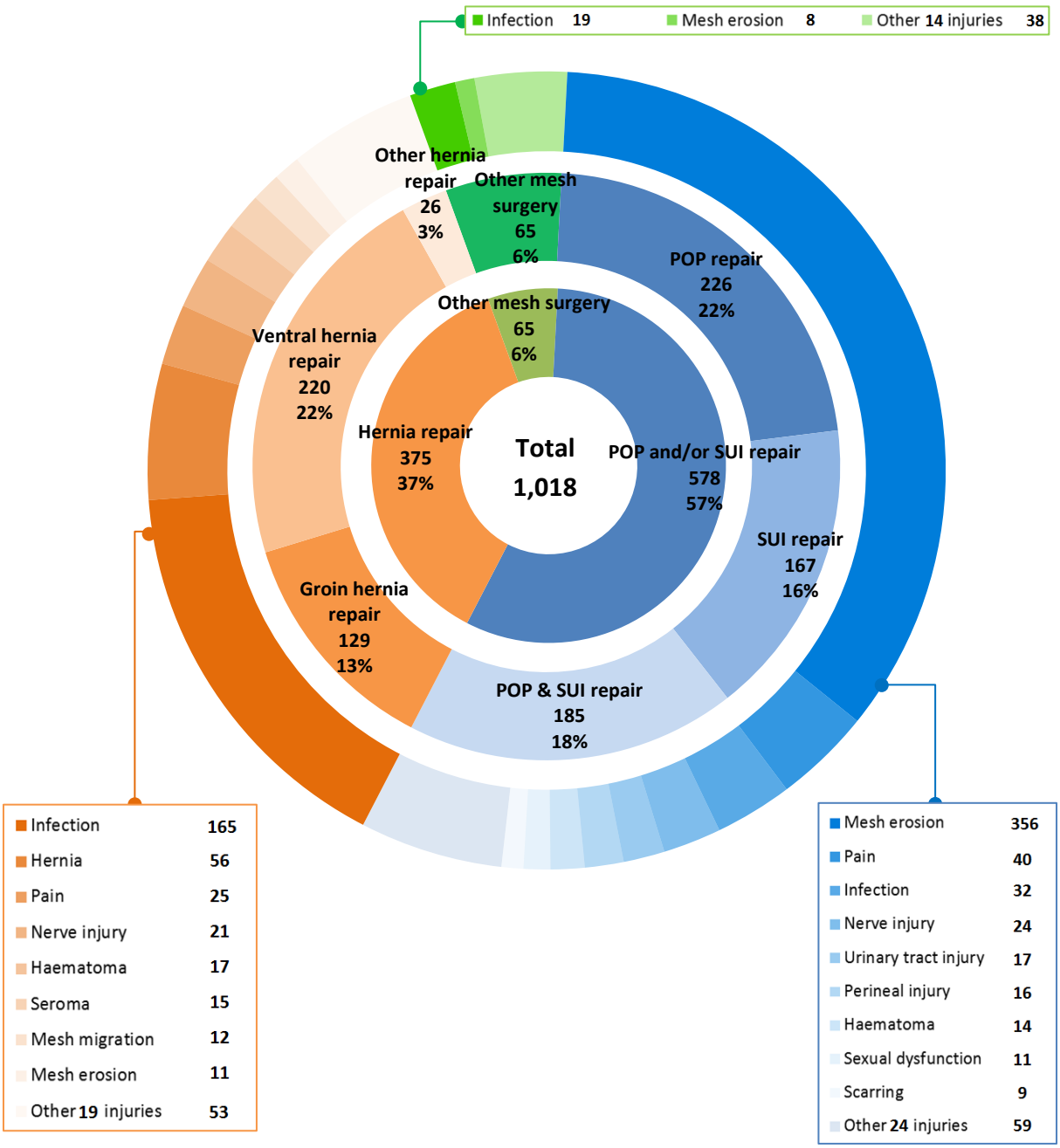


Figure 21 is a multi-level visual chart which provides an overview of the 1,018 surgical mesh-related claims by surgery type groups, surgery type and primary injury or symptom. Read the multi-level chart from inside > out:

- The centre ring shows that of the 1,018 claims, 57% relate to POP and/or SUI repair, 37% relate to hernia repair and 6% relate to other mesh surgeries.
- The middle ring provides a breakdown of surgery types. Of the 1,018 claims, 22% relate to POP repair and 22% relate to ventral hernia repair.
- The outside ring provides a breakdown of primary injury or symptom associated with the surgery type.

Table 13: Number of surgical mesh-related claims by surgery type groups by primary injury/symptom

Surgical mesh-related claim counts by surgery type groups by primary and secondary injury/symptom from 1 July 2005 to 30 June 2018								
POP and/or SUI repair			**Hernia repair**			**Other mesh surgery**		
Primary injury/symptom	**n**	**%**	**Primary injury/symptom**	**n**	**%**	**Primary injury/symptom**	**n**	**%**
Mesh erosion	356	62%	Infection	165	44%	Infection	19	29%
Pain	40	7%	Hernia	56	15%	Mesh erosion	8	12%
Infection	32	6%	Pain	25	7%	Hernia	7	11%
Nerve injury	24	4%	Nerve injury	21	6%	Fistula - other	5	8%
Urinary tract injury	17	3%	Haematoma	17	5%	Nerve injury	5	8%
Perineal injury	16	3%	Seroma	15	4%	Haematoma	4	6%
Haematoma	14	2%	Mesh migration	12	3%	Pain	4	6%
Sexual dysfunction	11	2%	Mesh erosion	11	3%	Other 9 injuries/symptoms	14	22%
Scarring	9	2%	Bowel injury	10	3%			
Urinary Incontinence	8	1%	Gastrointestinal injury	10	3%			
Mesh contraction	7	1%	Fistula - other	5	1%			
Urethral injury	6	1%	Hydrocele	5	1%			
Other 21 injuries/symptoms	38	7%	Other 15 injuries/symptoms	23	8%			
Total	**578**	**100%**	**Total**	**375**	**100%**	**Total**	**65**	**100%**
Secondary injury/symptom	**n**	**%**	**Secondary injury/symptom**	**n**	**%**	**Secondary injury/symptom**	**n**	**%**
Sexual dysfunction	55	16%	Infection	70	30%	Infection	13	28%
Perineal injury	52	15%	Mesh migration	20	9%	Wound dehiscence	6	13%
Infection	47	14%	Hernia	19	8%	Mesh erosion	4	9%
Pain	45	13%	Wound dehiscence	18	8%	Other 16 injuries/symptoms	23	50%
Mesh erosion	34	10%	Pain	18	8%			
Vascular injury	15	4%	Seroma	14	6%			
Scarring	11	3%	Fistula - other	10	4%			
Nerve injury	11	3%	Haematoma	10	4%			
Haematoma	10	3%	Bowel injury	6	3%			
Urinary tract injury	10	3%	Mesh erosion	6	3%			
Urinary Incontinence	7	2%	Gastrointestinal injury	4	2%			
Perforation - Other	5	1%	Vascular injury	4	2%			
Mesh contraction	5	1%	Necrosis	4	2%			
Mesh migration	5	1%	Other 16 injuries/symptoms	27	12%			
Fistula - other	5	1%						
Tissue injury / damage	4	1%						
Urethral injury	4	1%						
Other 14 injuries/symptoms	20	6%						
Total	**345**	**100%**	**Total**	**230**	**100%**	**Total**	**46**	**100%**

Note: Percentages may not add to 100% due to rounding.

Table 13 shows the 1,018 surgical mesh-related claims by surgery type groups by primary and secondary injury/symptom. Please note that a single claim can have one primary injury/symptom, but may have up to two or no secondary injuries/symptoms.

ACC data has identified three main surgery type groups for the surgical mesh-related claims, which are:

1. Pelvic Organ Prolapse (POP) and/or Stress Urinary Incontinence (SUI) repair
2. Hernia repair
3. 'Other' mesh surgery (This includes mesh removal surgery, sling surgery for male urinary incontinence, breast reconstruction and other reconstructive surgeries using mesh)

Overall, the primary and secondary injuries/symptoms vary by surgery type groups.

Of the 578 claims relating to POP and/or SUI repair, mesh erosion is the highest claim count (62%, n=356) of primary injuries. Mesh erosion can refer to mesh exposure, extrusion, and perforation, which is usually associated with pain. 7% (n=40) of claims have pain recorded as the primary injury/symptom because pain is what the claim was lodged for and/or no physical injury has been identified. Sexual dysfunction has the highest claim count for secondary injury/symptom (16%, n=55), followed closely by perineal injury (15%, n=52).

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group and male VMR claims are reported under 'Other' mesh surgery. Of the 1,018 claims, 13 relate to female VMR and fewer than four claims relate to male VMR surgery.

Of the 578 claims, 13 claims relate to female VMR procedure and are included across eight primary injuries/symptoms (the numbers are all less than four) e.g. mesh erosion, pain, nerve injury.

Of the 375 claims relating to hernia repair, infection is the highest claim count (44%, n=165) of primary injuries and 30% (n=70) of secondary injuries. Hernia is the second most common primary injury (15%, n=56), which refers to hernia recurrence or incisional hernia following hernia repair. There are fewer claims (3%, n=11) relating to mesh erosion for hernia repairs than the POP and/or SUI repair group (61%, n=354). Mesh migration occurs more in hernia repairs as the primary injury (3%, n=12) and secondary injury (9%, n=20) compared to POP and/or SUI repairs.

Table 14: Number of surgical mesh-related claims for POP and/or SUI repair by surgery type by primary and secondary injury/symptom

Surgical mesh-related claim counts for POP and/or SUI repair by surgery type by primary and secondary injury/symptom from 1 July 2005 to 30 June 2018								
POP repair			**SUI repair**			**POP & SUI repair**		
Primary injury/symptom	**n**	**%**	**Primary injury/symptom**	**n**	**%**	**Primary injury/symptom**	**n**	**%**
Mesh erosion	129	57%	Mesh erosion	111	66%	Mesh erosion	116	63%
Pain	18	8%	Pain	14	8%	Infection	16	9%
Nerve injury	15	7%	Urinary tract injury	7	4%	Pain	8	4%
Infection	10	4%	Infection	6	4%	Urinary tract injury	6	3%
Haematoma	9	4%	Nerve injury	5	3%	Sexual dysfunction	5	3%
Perineal injury	9	4%	Urinary Incontinence	4	2%	Perineal injury	5	3%
Scarring	6	3%	Other 14 injuries/symptoms	22	13%	Haematoma	5	3%
Mesh contraction	5	2%				Urinary Incontinence	4	2%
Urinary tract injury	4	2%				Nerve injury	4	2%
Sexual dysfunction	4	2%				Other 12 injuries/symptoms	16	9%
Other 12 injuries/symptoms	17	8%						
Total	**226**	**100%**	**Total**	**167**	**100%**	**Total**	**185**	**100%**
Secondary injury/symptom	**n**	**%**	**Secondary injury/symptom**	**n**	**%**	**Secondary injury/symptom**	**n**	**%**
Sexual dysfunction	26	17%	Infection	18	21%	Infection	22	20%
Perineal injury	22	15%	Sexual dysfunction	16	19%	Perineal injury	18	17%
Pain	19	13%	Pain	13	15%	Pain	13	12%
Mesh erosion	18	12%	Perineal injury	12	14%	Sexual dysfunction	13	12%
Vascular injury	12	8%	Mesh erosion	6	8%	Mesh erosion	10	9%
Scarring	8	5%	Nerve injury	4	5%	Haematoma	4	4%
Infection	7	5%	Other 11 injuries/symptoms	16	19%	Other 18 injuries/symptoms	29	27%
Nerve injury	6	4%						
Haematoma	5	3%						
Mesh contraction	4	3%						
Mesh migration	4	3%						
Other 11 injuries/symptoms	20	13%						
Total	**151**	**100%**	**Total**	**85**	**100%**	**Total**	**109**	**100%**

Note: Percentages may not add to 100% due to rounding.

Table 14 shows the 578 surgical mesh-related claims for POP and/or SUI repair by surgery type by primary and secondary injury/symptoms. ACC data has identified three main surgery types for POP and/or SUI repair which are:

1. Pelvic Organ Prolapse (POP)
2. Stress Urinary Incontinence (SUI) repair
3. Combined Pelvic Organ Prolapse & Stress Urinary Incontinence (POP & SUI) repair (NOTE: Combined POP & SUI repair refers to one single claim for one surgical event to treat both POP and SUI)

Of the 578 claims, mesh erosion is the highest primary injury across all POP and/or SUI repairs. Sexual dysfunction (17%, n=26), has the highest claim count for secondary injury/symptom for POP repair while infection has the highest claim count for SUI repair (21%, n=18) and POP & SUI repair (20%, n=22).

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP repair. Thirteen claims relate to female VMR procedure and are included across eight primary injuries/symptoms (the numbers are all less than four) e.g. mesh erosion, pain, nerve injury.

Table 15: Number of surgical mesh-related claims for hernia repair by surgery type by primary and secondary injury/symptom

Surgical mesh-related claim counts for hernia repair by surgery type by primary and secondary injury/symptom from 1 July 2005 to 30 June 2018								
Groin hernia repair			**Ventral hernia repair**			**Other hernia repair**		
Primary injury/symptom	**n**	**%**	**Primary injury/symptom**	**n**	**%**	**Primary injury/symptom**	**n**	**%**
Infection	36	28%	Infection	120	55%	Infection	7	27%
Hernia	25	19%	Hernia	28	13%	Haematoma	4	15%
Nerve injury	18	14%	Seroma	11	5%	Other 9 injuries/ symptoms	15	73%
Pain	16	12%	Haematoma	9	4%			
Mesh migration	10	8%	Mesh erosion	9	4%			
Hydrocele	5	4%	Gastrointestinal injury	8	4%			
Haematoma	4	3%	Pain	8	4%			
Other 10 injuries/ symptoms	15	12%	Bowel injury	7	3%			
			Other 12 injuries/ symptoms	20	9%			
Total	**129**	**100%**	**Total**	**220**	**100%**	**Total**	**26**	**100%**
Secondary injury/symptom	**n**	**%**	**Secondary injury/symptom**	**n**	**%**	**Secondary injury/symptom**	**n**	**%**
Infection	13	21%	Infection	46	30%	Infection	11	69%
Pain	10	16%	Wound dehiscence	14	9%	Other 5 injuries/ symptoms	5	31%
Mesh migration	8	13%	Seroma	12	8%			
Hernia	6	10%	Hernia	12	8%			
Haematoma	4	7%	Mesh migration	11	7%			
Other 14 injuries/ symptoms	20	33%	Fistula - other	10	7%			
			Pain	8	5%			
			Haematoma	6	4%			
			Bowel injury	6	4%			
			Mesh erosion	5	3%			
			Necrosis	4	3%			
			Other 11 injuries/ symptoms	19	12%			
Total	**61**	**100%**	**Total**	**153**	**100%**	**Total**	**16**	**100%**

Note: Percentages may not add to 100% due to rounding.

Table 15 shows the 375 surgical mesh-related claims for hernia repair by surgery type by primary and secondary injury/symptoms.

ACC data has identified three main surgery types for hernia repair, which are:

1. Groin hernia repair
2. Ventral hernia repair
3. 'Other' hernia repair (This includes hiatus hernia, perineal hernia, parastomal hernia or the hernia type is unknown).

Of the 375 claims, infection plays a significant part in primary and secondary injuries/symptoms in all hernia repairs. There is less mesh erosion occurring in hernia repair surgery in comparison to mesh erosion featuring predominantly in the POP, SUI and POP & SUI repairs. Hernia (which refers to hernia recurrence or incisional hernia following hernia repair) is the second most common primary injury in groin (19%, n=25) and ventral (13%, n=28) hernia repairs.

7. What device types relate to the surgical mesh-related claims?

Table 16: Number of surgical mesh-related claims for POP and/or SUI repairs and hernia repairs by device types

Surgical mesh-related claim counts by surgery type groups by device type from 1 July 2005 to 30 June 2018								
POP and/or SUI repair			Hernia repair			All mesh surgery		
Device type	n	%	Device type	n	%	Device type	n	%
TVT/TVT-O	153	26%	Prolene	73	19%	TVT/TVT-O	154	15%
Monarc	62	11%	Parietex	33	9%	Prolene	89	9%
Gynecare Prolift	56	10%	C-Qur	20	5%	Monarc	63	6%
Gynecare	39	7%	Surgipro	13	3%	Gynecare Prolift	56	6%
Apogee	32	6%	Prolite	10	3%	Gynecare	39	4%
Perigee	29	5%	Proceed	8	2%	Parietex	35	3%
SPARC	15	3%	Marlex	8	2%	Apogee	32	3%
Y-Mesh	10	2%	Ultrapro	8	2%	Perigee	31	3%
Caldera Ascend	10	2%	Physiomesh	6	2%	C-Qur	20	2%
Prolene	9	2%	Atrium	6	2%	Surgipro	19	2%
Uphold	9	2%	Permacol	5	1%	SPARC	15	1%
IVS	8	1%	3DMax	4	1%	Ultrapro	15	1%
Recto-Swing	7	1%	Dualmesh	<4	-%	Prolite	14	1%
Ultrapro	6	1%	Vipro	<4	-%	Marlex	13	1%
Cysto Swing	5	1%	GoreTex	<4	-%	Y-Mesh	10	1%
Gynecare Elevate	5	1%	A30ProLite	<4	-%	Caldera Ascend	10	1%
Surgisis	4	1%	Sepra Mesh	<4	-%	IVS	9	1%
Prosima	4	1%	Kugel	<4	-%	Uphold	9	1%
Vipro	<4	-%	Other	54	14%	Permacol	9	1%
Surgipro	<4	-%	Unknown	114	30%	Proceed	9	1%
Prolite	<4	-%				Recto-Swing	7	1%
Pelvicol	<4	-%				Physiomesh	7	1%
Marlex	<4	-%				Vipro	6	1%
Parietex	<4	-%				Atrium	6	1%
Sugilene	<4	-%				Cysto Swing	5	0%
3DMax	<4	-%				Gynaecare Elevate	5	0%
Other	24	5%				3DMax	5	0%
Unknown	75	26%				Surgisis	5	0%
						Prosima	4	-%
						GoreTex	4	-%
						Titanium mesh	<4	-%
						Pelvicol	<4	-%
						Dualmesh	<4	-%
						Kugel	<4	-%
						AdVance	<4	-%
						A30ProLite	<4	-%
						Sepra Mesh	<4	-%
						Teflon	<4	-%
						Sugilene	<4	-%
						Other	88	9%
						Unknown	206	20%
Total	**578**	**100%**	**Total**	**375**	**100%**	**Total**	**1,018**	**100%**

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4 (-%)"

Table 16 shows the 1,018 surgical mesh-related claims for POP and/or SUI repair and hernia repair by mesh device types. Note that from the clinical evidence received when assessing the claims, ACC identified the device type for about 71% (n=724) of the 1,018 claims.

ACC data has identified three main surgery type groups for the surgical mesh-related claims, which are:

1. Pelvic Organ Prolapse (POP) and/or Stress Urinary Incontinence (SUI) repair
2. Hernia repair
3. 'Other' mesh surgery (This includes mesh removal surgery, sling surgery for male urinary incontinence, breast reconstruction and other reconstructive surgeries using mesh)

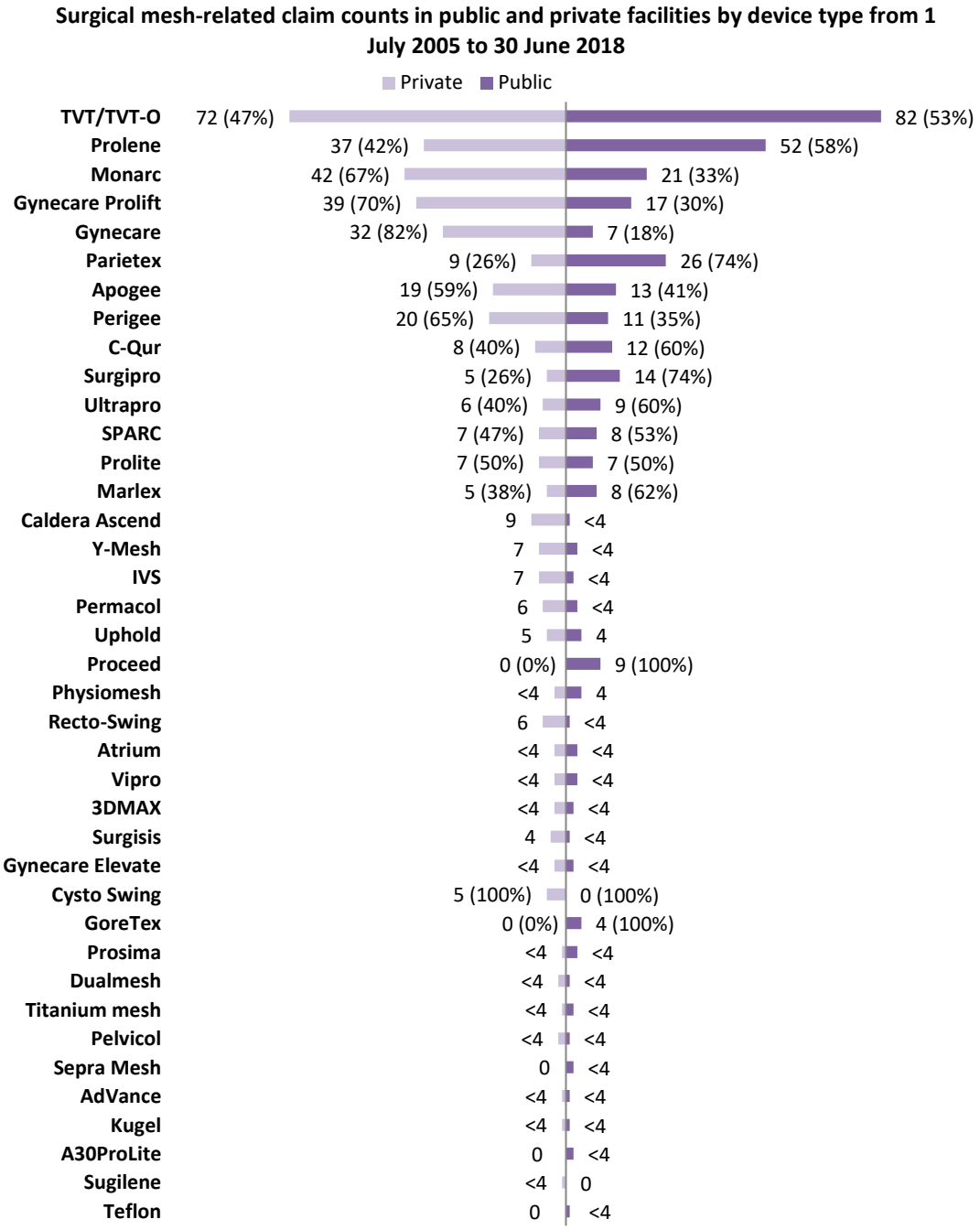
From the 724 claims where device types are identified, the device types vary by POP and/or SUI repair and hernia repair. TVT/TVT-O (26%, n=153) has the highest claim count and relates to POP and/or SUI repair (n=479), whereas Prolene (19%, n=73) has the highest claim count and relates to hernia repair (n=207). There are eight device types that are used for both POP/SUI repair and hernia repair.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group. Of the 578 claims, 13 relate to female VMR. ACC identified the device type for 11 of the 13 claims relating to female VMR. Of the 11 claims, four relate to Ultrapro and the remaining numbers are all less than four and are included across various devices e.g. Prolene, Gynecare, Prolite.

It is important to note that there are several claims where mesh device types have not been identified or not listed and therefore this table should be used with some caution.

ACC captures data from clinical evidence received to determine whether the claim meets the legislative criteria. This means that we do not routinely receive or require the device names or manufacturer detail. During the assessment of the clinical evidence, ACC will look to identify the device name and if this detail is included, ACC will capture this. Unknown (20%, n=206) is where ACC has not received the device details when collecting clinical evidence to determine whether the claim meets the criteria for cover.

Figure 22: Number of claims for surgical mesh-related events in public and private facilities by device types



Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4" and percentages are not provided for "<4". Percentage is calculated across each device type.

Figure 22 shows the claim counts for surgical mesh-related events in private or public facilities where mesh device types have been identified.

TVT/TVT-O device type is the highest claim count in both public and private facilities. Prolene is represented more in public (58%, n=52) than private facilities; this could be because more hernia repairs occurred in a public facility. While claims for Monarc, Gynecare Prolift and Gynecare appear more in private, this could be because more POP and/or SUI repairs occurred in private facilities. See Figure 18. For the female Ventral Mesh Rectopexy the highest number of claims relate to Ultrapro.

It is important to note that there are several claims where device types have not been identified or not listed (see Table 16) and therefore this figure should be used with some caution.

Table 17: Number of surgical mesh-related claims by device types by mesh implant surgery year

Surgical mesh-related claim by device type by surgery year from 1 July 2005 to 30 June 2018																										
Device type	1979/80	1982/83	1986/87	1990/91	1993/94	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
TVT/TVT-O	0	0	0	0	0	0	0	0	<4	<4	<4	4	<4	4	7	<4	10	7	5	10	9	17	16	10	18	15	10
Prolene	<4	0	0	0	0	0	0	0	0	<4	<4	<4	5	4	4	4	7	8	5	6	4	7	<4	5	9	8	<4
Monarc	0	0	0	0	0	0	0	0	0	0	0	0	<4	<4	6	7	5	8	5	<4	<4	9	<4	<4	8	<4	0
Gynecare Prolift	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	15	5	15	5	6	7	0	0	0	0	0	0
Gynecare	0	0	0	0	0	0	0	0	0	0	0	0	<4	7	6	<4	<4	7	<4	<4	<4	0	<4	<4	4	0	0
Parietex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	4	<4	<4	<4	<4	5	4	7	4	<4
Apogee	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	<4	5	13	<4	0	<4	0	0	0	0	0	0
Perigee	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	4	9	5	<4	<4	4	0	0	0	<4	0	0
C-Qur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	<4	<4	<4	<4	5	<4	<4	<4	<4
Surgipro	0	0	0	0	0	0	0	0	<4	<4	0	<4	<4	<4	<4	<4	0	<4	<4	<4	<4	<4	0	0	0	<4	<4
SPARC	0	0	0	0	0	0	0	0	0	0	<4	0	<4	0	0	<4	<4	<4	<4	0	<4	0	<4	<4	<4	<4	0
Ultrapro	0	0	0	0	0	0	0	0	<4	0	0	0	0	0	0	0	<4	0	<4	<4	<4	0	<4	0	<4	4	0
Prolite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	<4	<4	0	0	<4	<4	<4	<4	<4	0
Marlex	0	0	<4	0	0	0	<4	0	0	0	<4	0	<4	0	<4	<4	4	0	0	0	0	0	<4	0	0	0	0
Caldera Ascend	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	<4	<4	0	0	0	<4	0
Y-Mesh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	0	<4	<4	0	<4	<4	0	4	0	0	0
Permacol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	<4	<4	0	<4	<4	0
Uphold	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	0	4	<4	<4	0	<4	0
IVS	0	0	0	0	0	0	0	0	0	0	0	0	<4	5	<4	0	0	0	0	0	0	0	0	0	0	0	0
Proceed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	<4	<4	<4	<4	<4	0	0	0	0	<4	0
Recto-Swing	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	5	0	0	0	0	0	0	0	0	0	0	0	0
Physiomesh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	0	<4	<4	0	<4	0	0
Vipro	0	0	0	0	0	0	0	0	0	0	0	0	<4	<4	0	<4	0	<4	<4	0	0	0	0	0	<4	0	0
Atrium	0	0	0	0	0	0	0	0	0	0	0	0	<4	<4	0	0	0	<4	0	0	0	0	0	<4	0	<4	0
3DMAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	0	<4	0	0	0	0	<4	0
Cysto Swing	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	<4	0	<4	0	0	0	0	0	0	0	0	0	0
Gynecare Elevate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	0	<4	<4	0	0	0	0	0
Surgisis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	<4	0	0	<4	0	0	0	0	0
Prosima	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	<4	0	0	0	0	0	0	0
GoreTex	0	0	0	0	<4	0	0	0	0	0	0	0	0	<4	0	<4	0	0	0	0	0	0	0	0	0	0	0
Dualmesh	0	0	0	0	0	0	0	0	0	0	0	<4	0	0	0	0	0	<4	0	0	0	0	0	0	<4	0	0
Titanium mesh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	<4	<4	0	0	0	0	0	0	0
Pelvicol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	<4	0	0	0	0	0	0	0	0	0	0	0
A30ProLite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	0	<4	0	0	0	0
Kugel	0	0	0	0	0	0	0	0	0	0	0	<4	<4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AdVance	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	0	0	0	0	0	0	<4	0	0	0	0	0	0
Sepra Mesh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	0	<4	0	0	0	0	0	0	0	0	0
Sugilene	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	0	0	0	0	0	0	0	0	0	0	0	0	0
Teflon	0	<4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	<4	0	<4	<4	<4	0	5	<4	5	15	11	<4	6	5	<4	6	13	10
Unknown	0	0	0	<4	0	<4	0	<4	4	<4	4	9	6	9	12	13	21	16	16	9	11	14	6	5	15	21	7

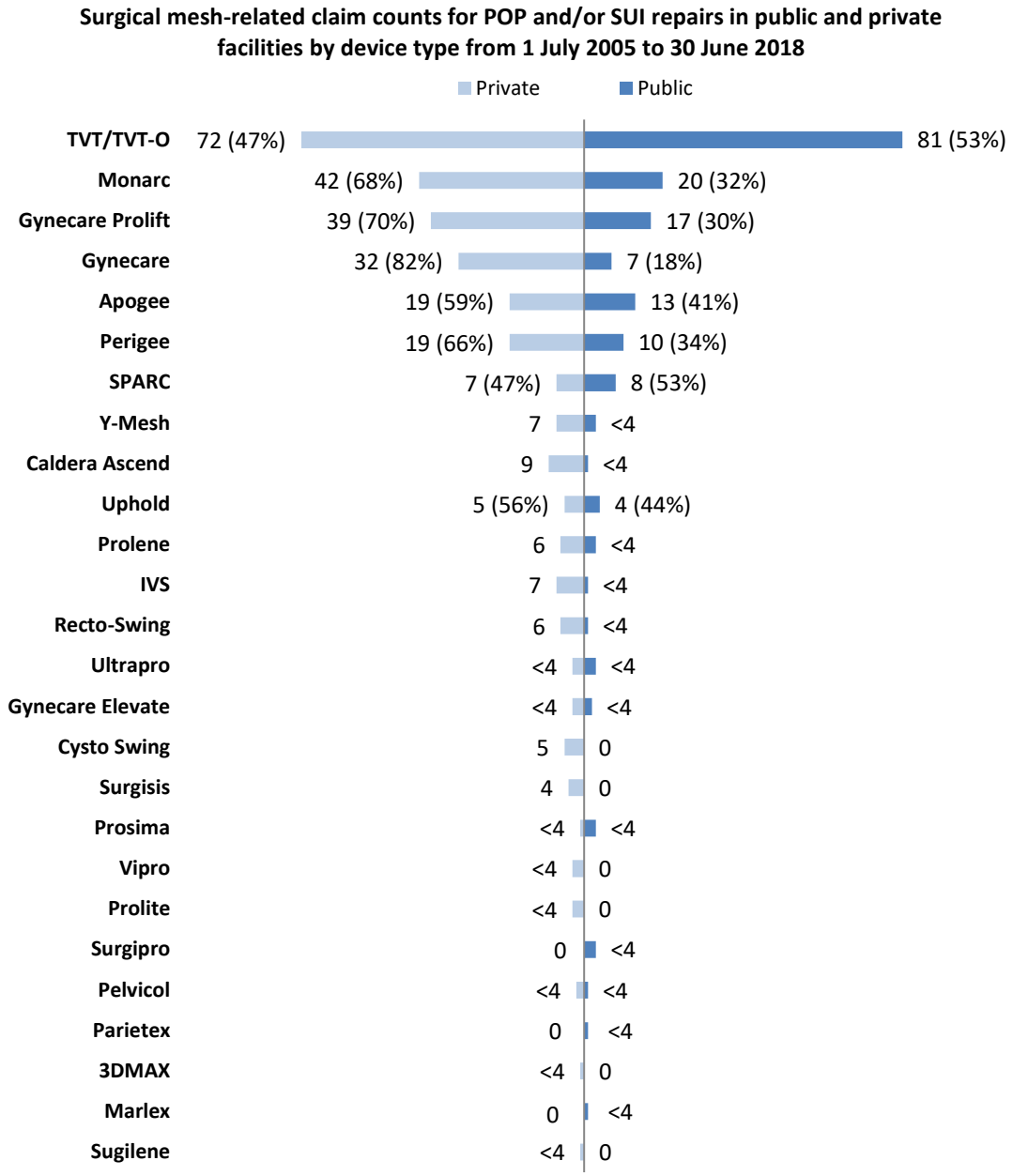
Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4"

Table 17 shows the 1,018 surgical mesh-related claims by device type by mesh implant surgery year. There are 4 claims where the surgery year is unknown. Please note that there are several claims where device types have not been identified or not listed and therefore this table should be used with some caution.

Of the 1,018 claims, the earliest record we have of a known device type is Prolene in 1979/80. In 2006/07 and 2008/09 Gynecare Prolift had the highest number of claims for these mesh implant surgery years.

From 2010/11 to 2017/18 TVT/TVT-O has the highest number of claims for these mesh implant surgery years.

Figure 23: Number of claims for surgical mesh-related events for POP and/or SUI repairs in public and private facilities by device types



Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4" and percentages are not provided for "<4". Percentage is calculated across each device type.

Figure 23 shows claim counts for POP and/or SUI repair in public and private facilities by mesh device types identified. Please note that there are several claims where device types have not been identified or not listed (see Table 16) and therefore this table should be used with some caution.

More treatment events occurred in private facilities than in public facilities across most of the known device types. TVT/TVT-O device type is the highest claim count in both private and public facilities. The second highest claim counts are for Monarc device type, followed by Gynecare Proflit device type.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group. Of the 578 claims, 13 relate to female VMR. ACC identified the device type for 11 of the 13 claims relating to female VMR. Of the 11 claims, four relate to Ultrapro and the remaining numbers are all less than four and are included across various devices e.g. Prolene, Gynecare, Prolite.

Table 18: Number of surgical mesh-related claims for POP and/or SUI repair by device types by mesh implant surgery year

Surgical mesh-related claim counts for POP and/or SUI repair by device type by surgery year from 1 July 2005 to 30 June 2018																			
Device type	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
TVT/TVT-O	<4	<4	<4	4	<4	4	7	<4	10	7	5	10	9	17	15	10	18	15	10
Monarc	0	0	0	0	<4	<4	6	7	5	8	5	<4	<4	8	<4	<4	8	<4	0
Gynecare Prolift	0	0	0	0	0	0	<4	15	5	15	5	6	7	0	0	0	0	0	0
Gynecare	0	0	0	0	<4	7	6	<4	<4	7	<4	<4	<4	0	<4	<4	4	0	0
Apogee	0	0	0	0	0	0	5	<4	5	13	<4	0	<4	0	0	0	0	0	0
Perigee	0	0	0	0	0	0	<4	4	9	4	<4	<4	4	0	0	0	<4	0	0
SPARC	0	0	<4	0	<4	0	0	<4	<4	<4	<4	0	<4	0	<4	<4	<4	<4	0
Caldera Ascend	0	0	0	0	0	0	0	0	0	0	6	0	<4	<4	0	0	0	<4	0
Y-Mesh	0	0	0	0	0	0	0	<4	0	<4	<4	0	<4	<4	0	4	0	0	0
Uphold	0	0	0	0	0	0	0	0	0	0	0	<4	0	4	<4	<4	0	<4	0
Prolene	0	0	<4	<4	0	0	0	0	<4	0	0	<4	<4	<4	0	0	<4	0	0
IVS	0	0	0	0	<4	5	<4	0	0	0	0	0	0	0	0	0	0	0	0
Recto-Swing	0	0	0	0	0	<4	5	0	0	0	0	0	0	0	0	0	0	0	0
Ultrapro	0	0	0	0	0	0	0	0	<4	0	<4	0	0	0	<4	0	0	<4	0
Gynecare Elevate	0	0	0	0	0	0	0	0	0	0	<4	0	<4	<4	0	0	0	0	0
Cysto Swing	0	0	0	0	0	<4	<4	0	<4	0	0	0	0	0	0	0	0	0	0
Prosima	0	0	0	0	0	0	0	0	0	0	<4	<4	0	0	0	0	0	0	0
Surgisis	0	0	0	0	0	0	0	0	0	<4	<4	0	0	0	0	0	0	0	0
Pelvicol	0	0	0	0	0	0	<4	<4	0	0	0	0	0	0	0	0	0	0	0
Surgipro	<4	0	0	<4	<4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prolite	0	0	0	0	0	0	0	0	<4	0	<4	0	0	0	0	0	0	0	0
Vipro	0	0	0	0	<4	<4	0	0	0	<4	0	0	0	0	0	0	0	0	0
Sugilene	0	0	0	0	0	<4	0	0	0	0	0	0	0	0	0	0	0	0	0
Parietex	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	0	0	0
3DMAX	0	0	0	0	0	0	0	0	0	0	<4	0	0	0	0	0	0	0	0
Marlex	0	0	0	0	0	0	0	<4	0	0	0	0	0	0	0	0	0	0	0
Other	0	<4	0	<4	<4	0	0	0	<4	<4	<4	4	<4	<4	<4	<4	<4	0	<4
Unknown	<4	<4	<4	4	4	4	8	9	9	7	5	<4	5	5	<4	0	<4	<4	<4

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4"

Table 18 shows the 578 surgical mesh-related claims for POP and/or SUI repair by device type by mesh implant surgery year. There are <4 claims where the surgery year is unknown. Please note that there are several claims where device types have not been identified or listed and therefore this table should be used with some caution.

Of the 578 claims, TVT/TVT-O is seen consistently since 2000/01 to 2016/17. TVT/TVT-O is the only identified device used in 2017/18 mesh implant surgery year. Monarc mesh is first seen in 2003/04 and is seen consistently until 2016/17. Gynecare Prolift appears between 2005/06 and 2011/12.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group. Of the 578 claims, 13 relate to female VMR. ACC identified the device type for 11 of the 13 claims relating to female VMR. Of the 11 claims, four relate to Ultrapro and the remaining numbers are all less than four and are included across various devices e.g. Prolene, Gynecare, Prolite.

Figure 24: Top 5 device types identified in surgical mesh-related claims for POP and/or SUI repair and the percentage of mesh erosions to device types

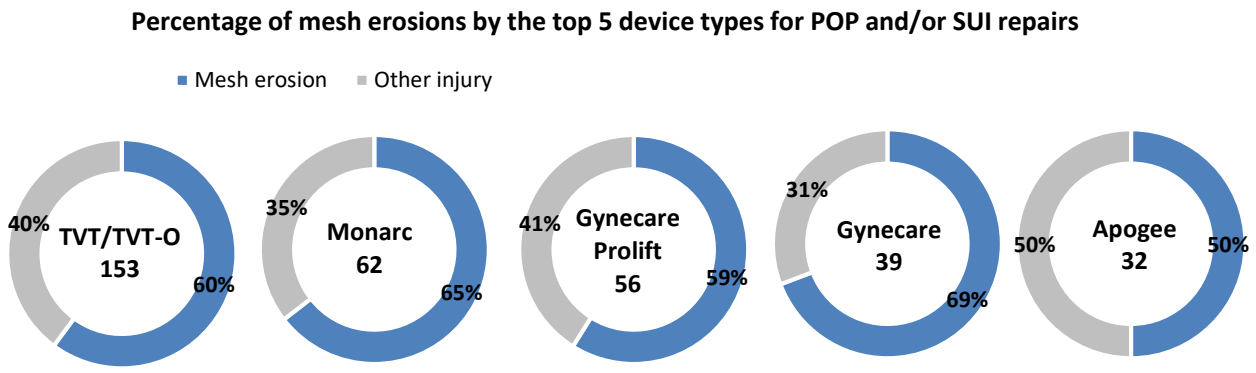


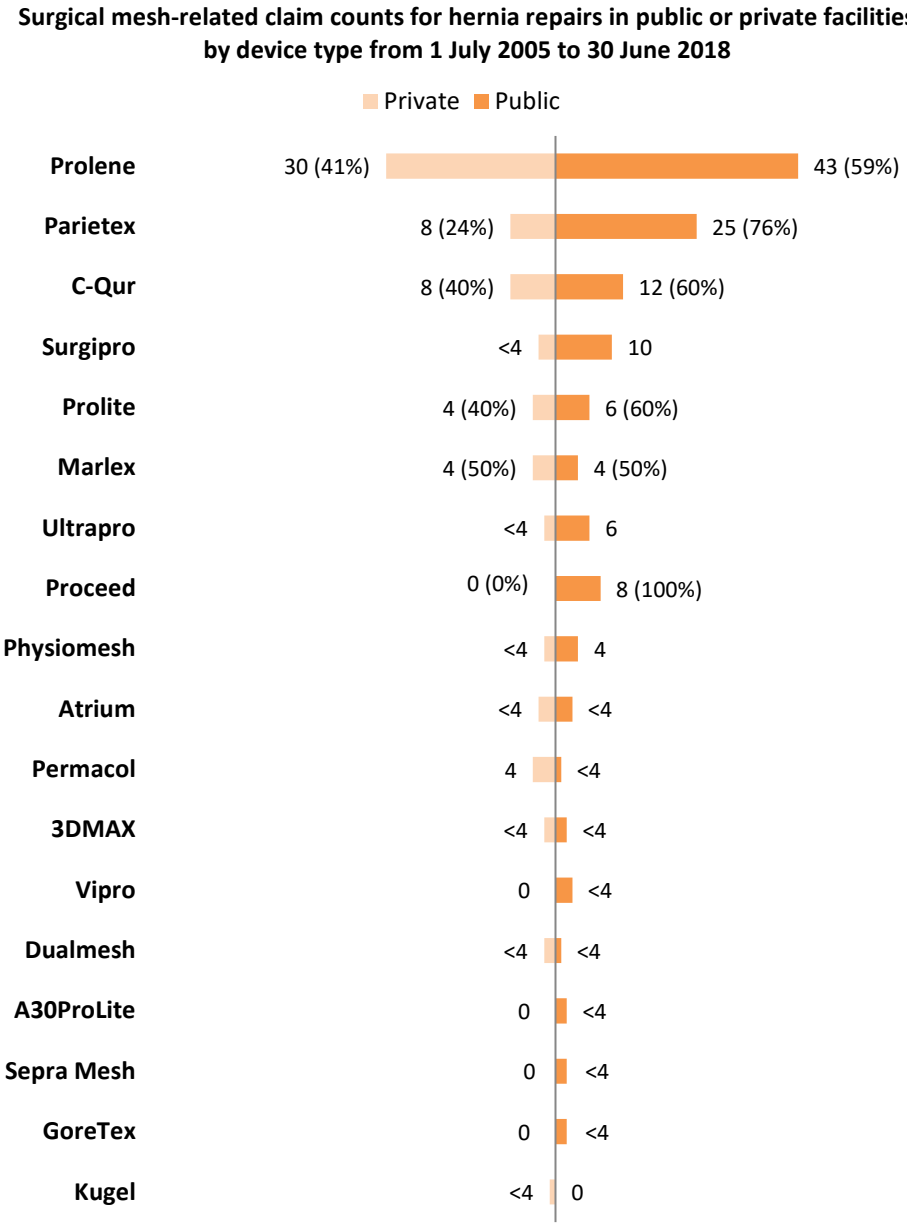
Figure 24 shows mesh erosion is identified as the primary injury in:

1. 60% of the 153 claims relate to TVT/TVT-O
2. 65% of the 62 claims relate to Monarc
3. 59% of the 56 claims relate to Gynecare Prolift
4. 69% of the 39 claims relate to Gynecare and
5. 50% of the 32 claims relate to Apogee.

For device types, ACC data is a combination of device name, type or brand of mesh. This way of capturing device types reflects how the device information is often recorded in clinical notes. Some claims have no mesh details; some have full mesh details, while other have only limited mesh information in the clinical notes (e.g. only the device type or the acronym TVT or TVT-O are provided). These device types are combined because sometimes TVT does not only refer to tension-free vaginal tape manufactured by Ethicon, it can also refer to a number of TVT-like sling alternatives. In addition, it is noted that sometimes TVT-O sling is described as TVT.

"TVT/TVT-O" is used to capture both the Ethicon TVT and those TVT-like slings where the actual name/brand was not specified in the clinical notes. Where more details of the TVT/TVT-O is available, the specific name/brand of the TVT/TVT-O would be recorded, e.g. Monarc.

Figure 25: Number of claims for surgical mesh-related events for hernia repairs in public or private facilities by device types



Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4" and percentages are not provided for "<4". Percentage is calculated across each device type.

Figure 25 shows the claim counts for hernia repairs in public or private facilities by mesh device types identified.

Of the known device types, Prolene is the highest across public and private facilities. More treatment events occurred in public facilities than in private facilities across most of the mesh device types. This reflects the previous findings showing in Figure 18 that a larger number of hernia repairs occurred in public facilities.

It is important to note that there are several claims where device types have not been identified or not listed (see Table 16) and therefore this table should be used with some caution.

Table 19: Number of surgical mesh-related claims for hernia repair by device types by mesh implant surgery year

Surgical mesh-related claim counts for hernia repair by device types by surgery year from 1 July 2005 to 30 June 2018																					
Device type	1993/94	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Prolene	0	0	0	<4	<4	<4	5	<4	4	<4	5	7	4	5	<4	<4	<4	5	8	8	<4
Parietex	0	0	0	0	0	0	0	0	0	0	<4	<4	<4	<4	<4	<4	5	<4	7	4	<4
C-Qur	0	0	0	0	0	0	0	0	0	0	0	<4	<4	<4	<4	<4	5	<4	<4	<4	<4
Surgipro	0	0	0	<4	0	<4	0	<4	0	<4	0	<4	<4	0	<4	<4	0	0	0	<4	<4
Prolite	0	0	0	0	0	0	0	0	0	0	<4	<4	0	0	0	<4	<4	<4	<4	<4	0
Ultrapro	0	0	<4	0	0	0	0	0	0	0	<4	0	0	<4	0	0	<4	0	<4	<4	0
Marlex	0	0	0	0	<4	0	<4	0	<4	0	<4	0	0	0	0	0	<4	0	0	0	0
Proceed	0	0	0	0	0	0	0	0	0	<4	<4	<4	<4	<4	<4	0	0	0	0	0	0
Atrium	0	0	0	0	0	0	<4	<4	0	0	0	<4	0	0	0	0	0	<4	0	<4	0
Physiomesh	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	0	<4	<4	0	<4	0	0
Permacol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	<4	<4	0	<4	0	0
3DMAX	0	0	0	0	0	0	0	0	0	0	0	0	<4	0	<4	0	0	0	0	<4	0
Vipro	0	0	0	0	0	0	0	0	0	<4	0	0	<4	0	0	0	0	0	<4	0	0
Dualmesh	0	0	0	0	0	<4	0	0	0	0	0	<4	0	0	0	0	0	0	<4	0	0
A30ProLite	0	0	0	0	0	0	0	0	0	0	0	0	0	0	<4	0	<4	0	0	0	0
Sepra Mesh	0	0	0	0	0	0	0	0	0	<4	0	<4	0	0	0	0	0	0	0	0	0
GoreTex	<4	0	0	0	0	0	0	<4	0	0	0	0	0	0	0	0	0	0	0	0	0
Kugel	0	0	0	0	0	0	<4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	4	<4	4	13	6	0	4	<4	0	<4	9	6
Unknown	0	<4	<4	0	<4	4	<4	4	4	<4	10	8	11	6	5	7	<4	5	12	19	5

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4".

Table 19 shows the 375 surgical mesh-related claims for hernia repair by device types by mesh implant surgery year. There are <4 claims where the surgery year is unknown.

From the known device types, the earliest record of the device type for hernia repair is GoreTex in 1993/94. Prolene is represented for over 15 years. Parietex and C-Qur are also seen over the past decade.

It is important to note that there are several claims where device types have not been identified or not listed and therefore this table should be used with some caution.

8. What are the costs related to surgical mesh-related claims?

Figure 26: Costs paid on accepted surgical mesh-related claims by payment type

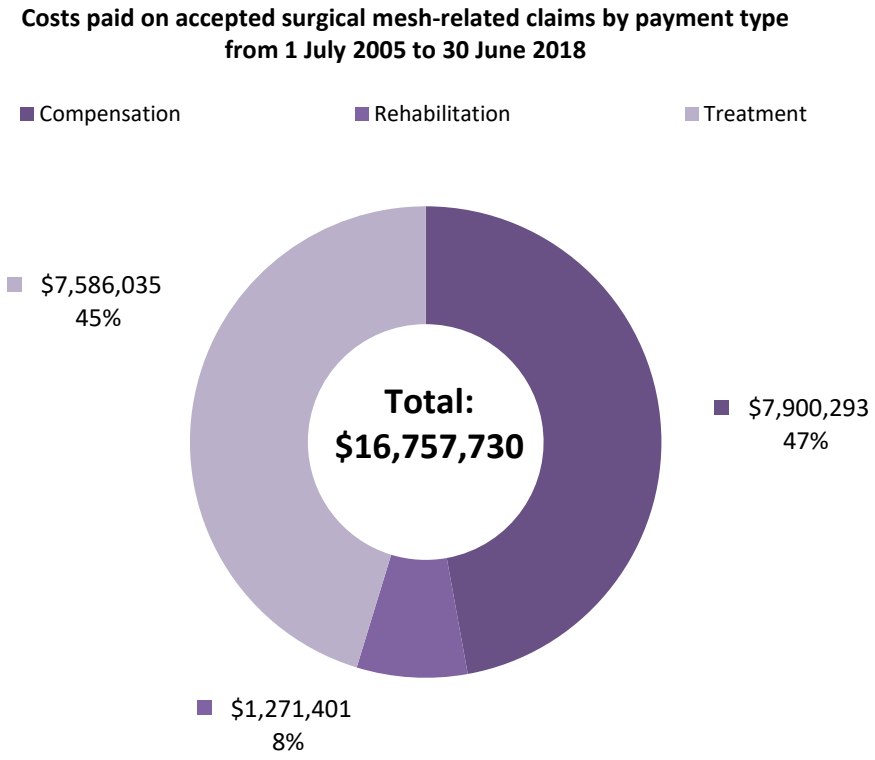


Figure 26 shows the total costs paid for the 736 accepted surgical mesh-related claims - that incurred costs - by payment type to 30 June 2018.

Of the 771 accepted surgical mesh-related claims, 95% (n=736) incurred costs. As at 30 June 2018, the total costs paid on the 736 claims is about $16.8 million. The proportion of total costs is similar for compensation (47%, $7.9 million) and treatment (45%, $7.6 million) payment types.

There are three broad categories of costs a claim could incur:

- Compensation (weekly compensation for lost earnings; lump sums, and death benefits)
- Treatment (initial hospital treatment and ongoing primary and secondary treatment)
- Rehabilitation support (physical rehabilitation and various forms of personal support).

The biggest single factor in determining the long-term costs of some injuries is the amount of personal support needed by the client. Some treatment injury types may pertain to injuries which may be minor and require little or no on-going support from ACC, whereas other treatment injury types may pertain to serious or major injuries which will require long-term and on-going support from ACC.

Figure 27: Costs paid on accepted surgical mesh-related claims by surgery type groups

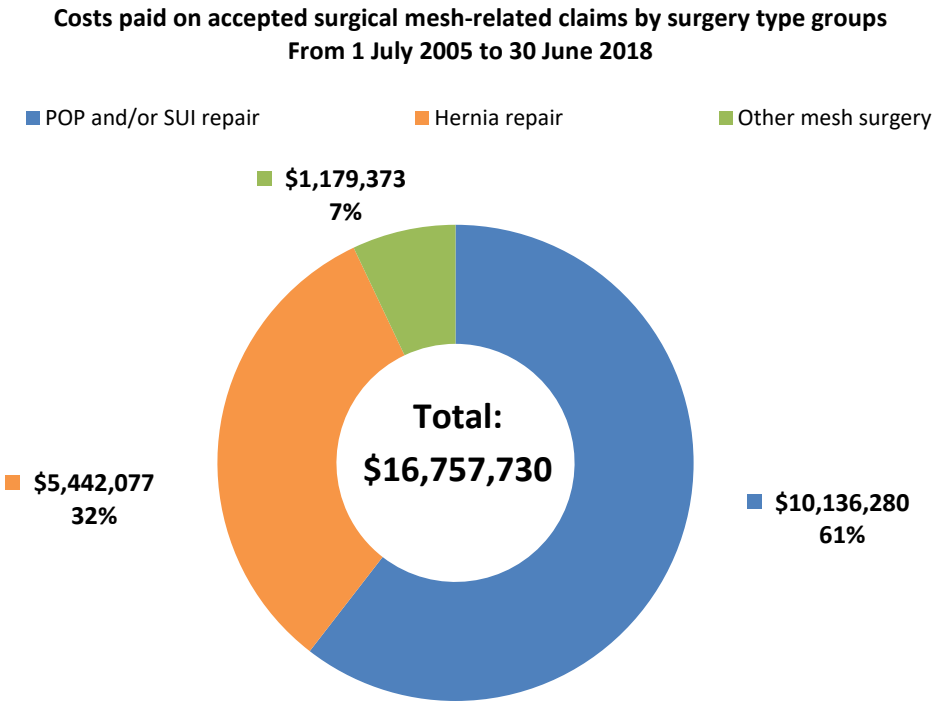


Figure 27 shows the total costs paid for the 736 accepted surgical mesh-related claims - that incurred costs - by surgery type groups to 30 June 2018.
ACC data has identified three main surgery type groups for the surgical mesh-related claims, which are:

1. Pelvic Organ Prolapse (POP) and/or Stress Urinary Incontinence (SUI) repair
2. Hernia repair
3. 'Other' mesh surgery (This includes mesh removal surgery, sling surgery for male urinary incontinence, breast reconstruction and other reconstructive surgeries using mesh)

Of the 771 accepted surgical mesh-related claims, 95% (n=736) incurred costs. As at 30 June 2018, the total costs paid are $16.8 million on 736 claims. Of the $16.8 million, 61% ($10.1 million) of the total costs associate with POP and/or SUI repair (439 claims incurred costs); 32% (5.4 million) for hernia repair (253 claims incurred costs), and 8% ($1.2 million) for 'Other' mesh surgery (44 claims incurred costs).

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group and male VMR claims are reported under 'Other' mesh surgery.

As at 30 June 2018, VMR claims incurred costs of $461,844. Of the 736 claims, nine accepted claims relate to female VMR and incurred costs of $453,211. Fewer than four claims relate to male VMR and incurred costs of $8,634.

Table 20: Time (in years) between decision date and the latest payment date for surgery type groups

Time (in years) between decision date and the latest payment date for surgery type groups from 1 July 2005 to 30 June 2018						
Years	**POP and/or SUI repair**		**Hernia repair**		**Other mesh surgery**	
	n	**%**	**n**	**%**	**n**	**%**
< 1	260	59%	180	71%	22	50%
1-2	78	18%	29	11%	9	20%
2-3	32	7%	8	3%	<4	-%
3-4	24	5%	13	5%	<4	-%
4-5	11	3%	<4	-%	4	9%
>5	34	8%	20	8%	5	11%
Total	**439**	**100%**	**253**	**100%**	**44**	**100%**

Note: 1 year =365 days; claim counts fewer than four (n=1, 2 or 3) are presented as "<4 (-%)"

Table 20 shows the 736 surgical mesh-related claims - that incurred costs – by time (in years) between decision date and the latest payment date by surgery type groups to 30 June 2018.
ACC data has identified three main surgery type groups for the surgical mesh-related claims, which are:

1. Pelvic Organ Prolapse (POP) and/or Stress Urinary Incontinence (SUI) repair
2. Hernia repair
3. 'Other' mesh surgery (This includes mesh removal surgery, sling surgery for male urinary incontinence, breast reconstruction and other reconstructive surgeries using mesh)

As at 30 June 2018:

- Of the 771 accepted surgical mesh-related claims, 95% (n=736) incurred costs. 21% (n=158) of the 736 claims received payment two years (or more) post decision date.
- Of the 453 accepted surgical mesh-related claims for POP and/or SUI repair, 97% (n=439) incurred costs. 23% (n=101) of the 439 claims received payment two years (or more) post decision date
- Of the 271 accepted surgical mesh-related claims for hernia repair, 93% (n=253) incurred costs. 17% (n=44) of the 253 claims received payment two years (or more) post decision date
- Of the 47 accepted surgical mesh-related claims for 'Other' mesh surgery, 94% (n=44) incurred costs. 30% (n=13) of the 44 claims received payment two years (or more) post decision date

The biggest single factor in determining the long-term costs of some injuries is the amount of personal support needed by the client. Some treatment injury types may pertain to injuries which may be minor and require little or no on-going support from ACC, whereas other treatment injury types may pertain to serious or major injuries which will require long-term and on-going support from ACC.

Note costs are to 30 June 2018, therefore claims accepted in 2017/18 may have less cost incurred compared to a claim that was accepted in 2010/11.

Figure 28: Costs paid on accepted claims for POP and/or SUI repair by payment type

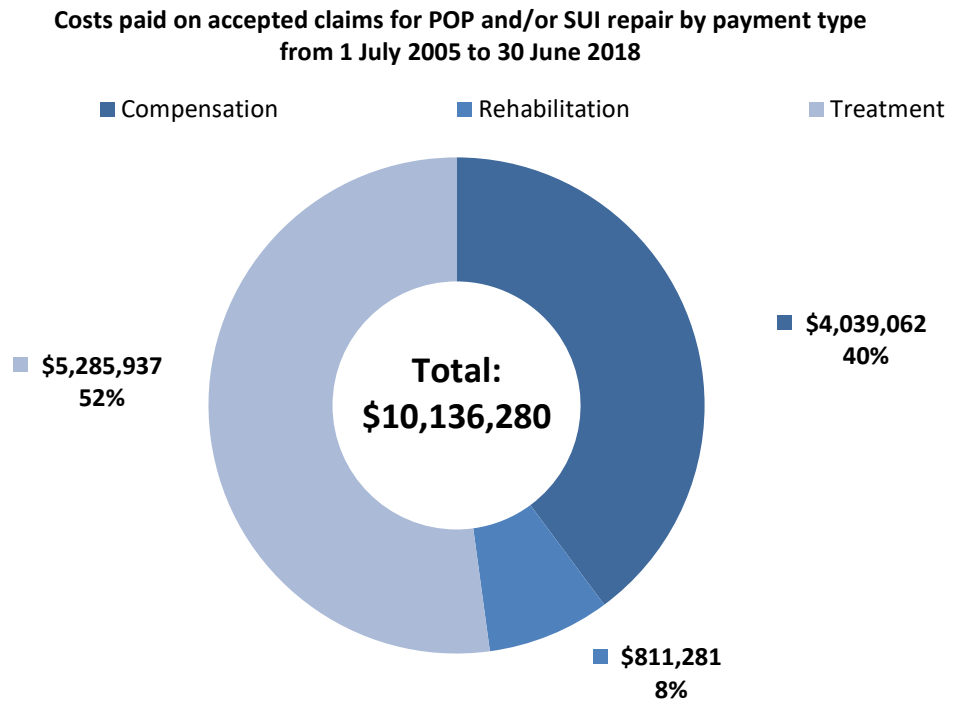


Figure 28 shows the total costs paid for the 439 accepted surgical mesh-related claims – that incurred costs - for POP and/or SUI repair by payment type to 30 June 2018.

Of the 453 accepted surgical mesh-related claims for POP and/or SUI repair, 97% (n=439) incurred costs. As at 30 June 2018 the total costs paid on the 439 claims is just over $10 million. Of the $10 million, 52% (n=5.3 million) of the total costs is for treatment, followed by 40% (n=4.0 million) for compensation, and 8% (n=$0.8 million) for rehabilitation.

There are three broad categories of costs a claim could incur:

- Compensation (weekly compensation for lost earnings, lump sums and death benefits)
- Treatment (initial hospital treatment and ongoing primary and secondary treatment)
- Rehabilitation support (physical rehabilitation and various forms of personal support).

The biggest single factor in determining the long-term costs of some injuries is the amount of personal support needed by the client. Some treatment injury types may pertain to injuries which may be minor and require little or no on-going support from ACC, whereas other treatment injury types may pertain to serious or major injuries which will require long-term and on-going support from ACC.

Figure 29: Costs paid on accepted surgical mesh-related claims for POP and/or SUI repair by surgery type

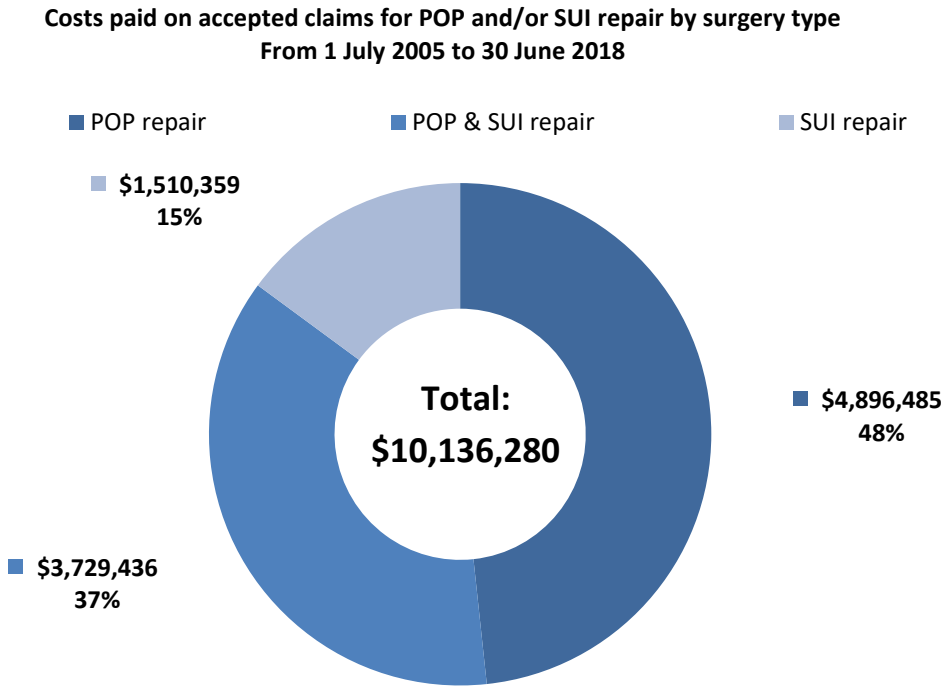


Figure 29 shows the total costs paid for the 439 accepted surgical mesh-related claims – that incurred costs – for POP and/or SUI repair by surgery type to 30 June 2018.
ACC data has identified three main surgery types for POP and/or SUI repair which are:

1. Pelvic Organ Prolapse (POP)
2. Stress Urinary Incontinence (SUI) repair
3. Combined Pelvic Organ Prolapse & Stress Urinary Incontinence (POP & SUI) repair (NOTE: Combined POP & SUI repair refers to one single claim for one surgical event to treat both POP and SUI)

Of the 453 accepted claims for POP and/or SUI repair, 97% (n=439) incurred costs. As at 30 June 2018 the total costs paid on the 439 claims is just over $10 million. Of the $10 million, 48% (n=$4.9 million) of the costs associate with claims for POP repair, and 37% ($3.7 million) for POP and/or SUI repair.

As at 30 June 2018:

- Of the 170 accepted surgical mesh-related claims for POP repair, 97% (n=165) incurred costs.
- Of the 133 accepted surgical mesh-related claims for SUI repair, 94% (n=125) incurred costs.
- Of the 150 accepted surgical mesh-related claims for combined POP & SUI repair, 99% (n=149) incurred costs.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP repair. Of the 439 claims, nine accepted claims relate to female VMR and incurred costs of $453,211.

Table 21: Costs paid on accepted surgical mesh-related claims for POP and/or SUI repair by surgery type by payment type per fiscal year

Costs paid on accepted surgical mesh-related claims for POP and/or SUI repair by surgery type by payment type per fiscal year from 1 July 2005 to 30 June 2018									
	POP repair			SUI repair			POP and SUI repair		
Fiscal year	Compensation	Treatment	Rehabilitation	Compensation	Treatment	Rehabilitation	Compensation	Treatment	Rehabilitation
2006/07	$18,002	$24,908	$244	$0	$401	$711	$472	$11,824	$1,960
2007/08	$54,342	$30,117	$3,331	$3,156	$24,907	$0	$5,742	$42,649	$1,131
2008/09	$59,748	$77,369	$13,884	$21,175	$36,009	$1,188	$54,595	$63,538	$3,121
2009/10	$45,148	$121,792	$5,199	$16,224	$12,108	$450	$52,618	$94,383	$4,217
2010/11	$15,616	$50,157	$1,599	$4,672	$18,603	$0	$26,721	$52,703	$13,722
2011/12	$83,601	$101,143	$4,843	$4,274	$35,238	$710	$21,568	$101,380	$2,656
2012/13	$60,660	$193,448	$10,811	$2,186	$67,124	$863	$16,870	$129,183	$4,162
2013/14	$524,307	$183,602	$26,211	$7,388	$28,287	$1,158	$33,049	$229,494	$38,494
2014/15	$366,628	$352,867	$33,057	$26,656	$147,919	$6,426	$120,685	$295,422	$2,383
2015/16	$340,194	$323,167	$109,963	$131,285	$128,441	$14,369	$346,131	$396,918	$24,318
2016/17	$404,627	$257,484	$104,724	$24,880	$175,499	$14,326	$255,036	$450,377	$86,665
2017/18	$408,034	$347,888	$137,770	$202,409	$306,463	$44,856	$280,363	$373,127	$91,761
Total	**$2,380,907**	**$2,063,942**	**$451,636**	**$444,304**	**$980,998**	**$85,057**	**$1,213,851**	**$2,240,998**	**$274,588**

Table 21 shows the total costs paid for the 439 accepted surgical mesh-related claims – that incurred costs – for POP and/or SUI repair by surgery type by payment type per fiscal year to 30 June 2018.

It is noted that for POP repair, there is a significant increase in the compensation costs in 2013/14 compared to previous years. The increase is mainly due to four claims with a large amount of compensation paid (this could include some backdated payment). The compensation of these four claims accounts for about 86% (about $420,000) of the total compensation costs for that year (about $524,000).

It is expected that the total costs increase over time, because the costs incurred in a year are not restricted to claims accepted that year; they can also include costs of earlier claims – i.e. the costs accumulate from the year the claim was decided. For example, claims decided in 2012/13 may incur payments in 2013/14, 2014/15, 2015/16, etc.

There are three broad categories of costs a claim could incur:

- Compensation (weekly compensation for lost earnings; lump sums, and death benefits)
- Treatment (initial hospital treatment and ongoing primary and secondary treatment)
- Rehabilitation support (physical rehabilitation and various forms of personal support).

The biggest single factor in determining the long-term costs of some injuries is the amount of personal support needed by the client. Some treatment injury types may pertain to injuries which may be minor and require little or no on-going support from ACC, whereas other treatment injury types may pertain to serious or major injuries which will require long-term and on-going support from ACC.

Figure 30: Costs paid on accepted surgical mesh-related claims for hernia repair by payment type

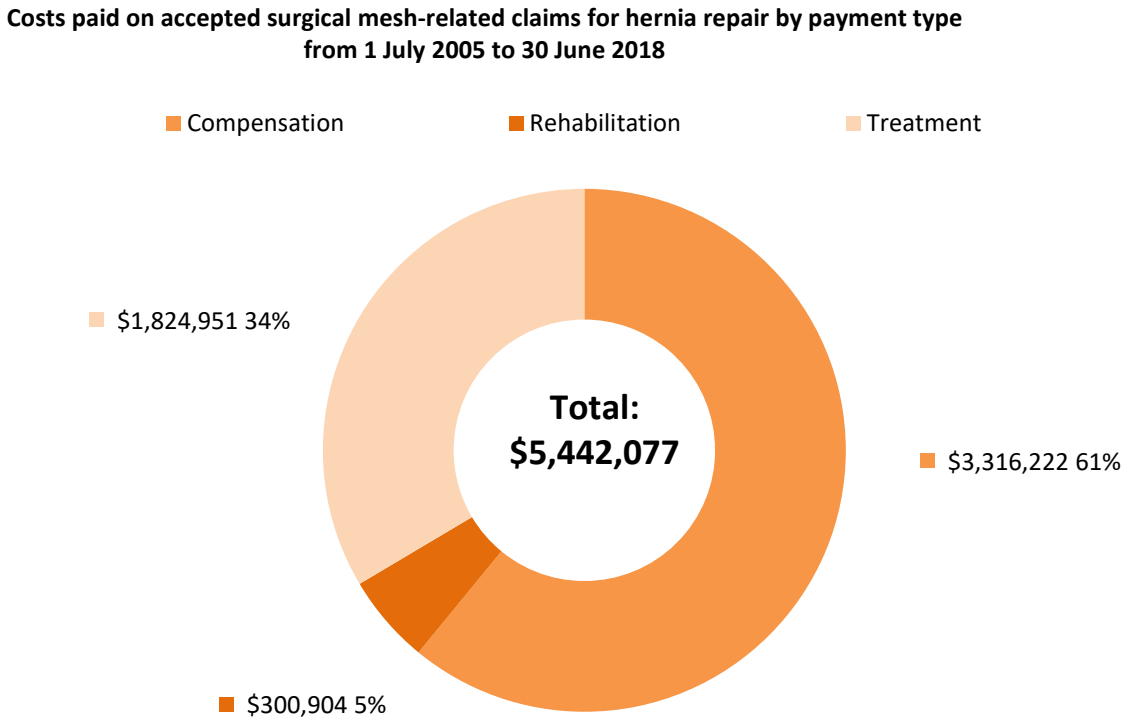


Figure 30 shows the total costs paid for the 253 accepted surgical mesh-related claims – that incurred costs - for hernia repair by payment type to 30 June 2018.

Of the 271 accepted surgical mesh-related claims for hernia repair, 93% (n=253) of claims incurred costs. As at 30 June 2018 the total costs paid on the 253 claims is just over $5.4 million. About 61% (n=3.3 million) of this cost is for compensation, whereas 34% (n=$1.8 million) is for treatment costs.

There are three broad categories of costs a claim could incur:

- Compensation (weekly compensation for lost earnings; lump sums, and death benefits)
- Treatment (initial hospital treatment and ongoing primary and secondary treatment)
- Rehabilitation support (physical rehabilitation and various forms of personal support).

The biggest single factor in determining the long-term costs of some injuries is the amount of personal support needed by the client. Some treatment injury types may pertain to injuries which may be minor and require little or no on-going support from ACC, whereas other treatment injury types may pertain to serious or major injuries which will require long-term and on-going support from ACC.

Figure 31: Costs paid on accepted surgical mesh-related claims for hernia repair by surgery type

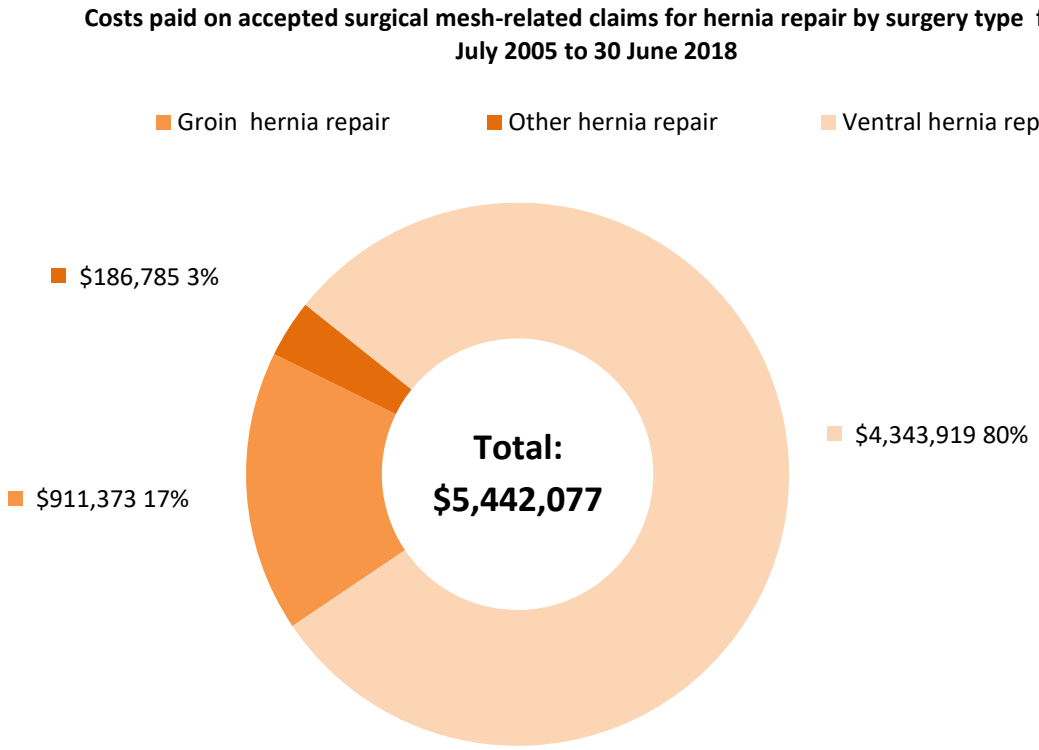


Figure 31 shows the total costs paid for the 253 accepted surgical mesh-related claims – that incurred costs – for hernia repair by surgery type to 30 June 2018.
ACC data has identified three main surgery types for hernia repair, which are:

1. Groin hernia repair
2. Ventral hernia repair
3. 'Other' hernia repair (This includes hiatus hernia, perineal hernia, parastomal hernia or the hernia type is unknown).

Of the 271 accepted claims for hernia repair, 91% (n=253) incurred costs. As at 30 June 2018, the total costs paid on the 253 claims is just over $5.4 million. Of the $5.4 million, 80% (n=4.3 million) associates with claims for ventral hernia repair.

As at 30 June 2018:

- Of the 170 accepted surgical mesh-related claims for Ventral hernia repair, 92% (n=156) incurred costs.
- Of the 79 accepted surgical mesh-related claims for groin hernia repair, 96% (n=76) incurred costs.
- Of the 22 accepted surgical mesh-related claims for 'Other' hernia repair, 95% (n=21) incurred costs.

Table 22: Costs paid on accepted surgical mesh-related claims for hernia repair by surgery type by payment type per fiscal year

Costs paid on accepted surgical mesh-related claims for hernia repair by surgery type by payment type per fiscal year from 1 July 2005 to 30 June 2018									
	Groin hernia repair			Ventral hernia repair			Other hernia repair		
Fiscal year	Compensation	Treatment	Rehabilitation	Compensation	Treatment	Rehabilitation	Compensation	Treatment	Rehabilitation
2005/06	$0	$0	$0	$33,768	$2,498	$1,628	$894	$400	$0
2006/07	$24,022	$665	$0	$141,906	$32,436	$3,749	$8,484	$778	$0
2007/08	$845	$16,217	$195	$67,380	$20,600	$5,404	$0	$45	$0
2008/09	$26,651	$15,613	$2,279	$123,056	$124,401	$3,605	$2,760	$74	$0
2009/10	$53,261	$36,754	$1,268	$133,966	$129,393	$1,200	$15,459	$13,543	$8
2010/11	$14,569	$40,063	$872	$85,638	$27,130	$1,984	$3,210	$21,292	$4
2011/12	$0	$883	$0	$93,130	$78,590	$10,812	$0	$0	$0
2012/13	$29,800	$15,740	$2,046	$63,372	$38,651	$10,046	$739	$106	$0
2013/14	$66,759	$36,160	$5,906	$254,493	$227,180	$21,227	$560	$672	$0
2014/15	$30,860	$1,728	$3,159	$522,386	$158,035	$41,359	$0	$118	$0
2015/16	$39,617	$20,907	$0	$235,679	$87,975	$35,505	$0	$0	$0
2016/17	$66,272	$72,379	$20,651	$532,079	$178,659	$66,641	$0	$6,599	$228
2017/18	$144,013	$113,900	$7,319	$477,464	$224,052	$46,843	$23,128	$80,714	$6,970
Total	**$496,670**	**$371,010**	**$43,693**	**$2,764,318**	**$1,329,600**	**$250,001**	**$55,234**	**$124,341**	**$7,210**

Table 22 shows the total costs paid for the 253 accepted surgical mesh-related claims – that incurred costs – for hernia repair by surgery type by payment type per fiscal year to 30 June 2018.

It is noted that the compensation costs for claims relate to ventral hernia repair are higher in 2014/15, 2016/17 and 2017/18 than in other years. The higher costs relate to a small number of claims with a high amount of compensation paid in those years (this could include some backdated payment).

It is expected that the total costs increase over time, because the costs incurred in a year are not restricted to claims accepted in that year; they can also include costs for earlier claims – i.e. the costs accumulate from the year the claim was decided. For example, claims decided in 2012/13 may incur payments in 2013/14, 2014/15, 2015/16, etc.

There are three broad categories of costs a claim could incur:

- Compensation (weekly compensation for lost earnings; lump sums, and death benefits)
- Treatment (initial hospital treatment and ongoing primary and secondary treatment)
- Rehabilitation support (physical rehabilitation and various forms of personal support).

The biggest single factor in determining the long-term costs of some injuries is the amount of personal support needed by the client. Some treatment injury types may pertain to injuries which may be minor and require little or no on-going support from ACC, whereas other treatment injury types may pertain to serious or major injuries which will require long-term and on-going support from ACC.

9. What are the key time points for surgical mesh-related claims?

Figure 32: Number of surgical mesh-related claims by fiscal year of surgery, injury, lodgement and decision

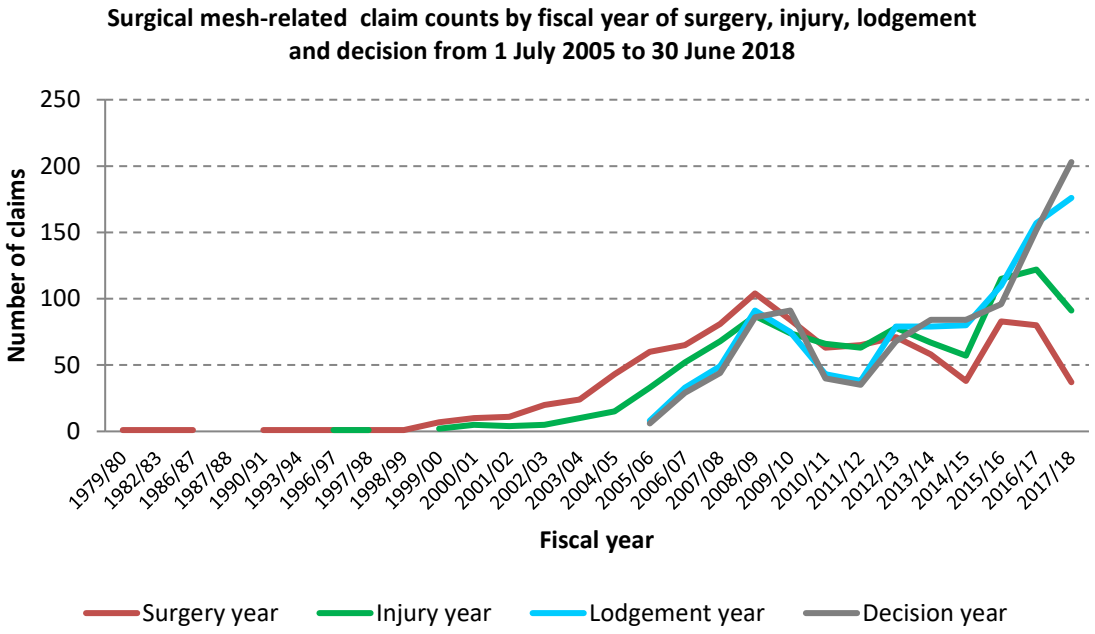


Figure 32 shows the 1,018 surgical mesh-related claims by fiscal year of surgery, injury, lodgement and decision. ACC definitions of time parameters:

- **Date of surgery** refers to the date of the mesh implant surgery
- **Date of injury** refers to the date the person first seeks or receives treatment for the symptoms of that personal injury. AC Act 2001, section 38, subsection (1) and (2) applies.
- **Date of lodgement** refers to the date the ACC treatment injury claim is lodged.
- **Date of decision** refers to the date ACC issued the decision on the claim.

Of the 1,018 claims, the highest number of surgical mesh-related claims **lodged** and **decided** is in 2017/18. However the highest peak for claims relate to a particular **surgery** year is in 2008/09. There are two high peaks for claims relating to a particular **injury** year which is in 2008/09 and in 2016/17.

Example: ACC could make a **decision in 2016/17** on a claim **lodged in 2016/17** for an **injury** that occurred **in 2009/10** for **surgery** that occurred **in 2008/09**.

Please note that claims **lodged** in a year may have been **decided** in the same year or, if the claim is more complex, it may have been decided the following year.

See Table 24 for more detail on the number of surgical mesh-related claims by **decision** year by **surgery** year.

Table 23: Number of surgical mesh-related claims by fiscal year of surgery, injury, lodgement and decision

Surgical mesh-related claim counts by fiscal year of surgery, injury, lodgement and decision from 1 July 2005 to 30 June 2018				
Fiscal year	**Claim count in Surgery year**	**Claim count in Injury year**	**Claim count in Lodgement year**	**Claim count in Decision year**
1979/80	<4	0	0	0
1982/83	<4	<4	0	0
1986/87	<4	0	0	0
1987/88	0	<4	0	0
1990/91	<4	0	0	0
1993/94	<4	0	0	0
1996/97	<4	<4	0	0
1997/98	<4	<4	0	0
1998/99	<4	0	0	0
1999/00	7	<4	0	0
2000/01	10	5	0	0
2001/02	11	4	0	0
2002/03	20	5	0	0
2003/04	24	10	0	0
2004/05	44	15	0	0
2005/06	60	33	8	6
2006/07	65	52	33	29
2007/08	81	68	49	44
2008/09	104	87	91	86
2009/10	84	74	75	91
2010/11	63	66	43	40
2011/12	65	63	38	35
2012/13	71	78	79	68
2013/14	58	67	79	84
2014/15	38	57	80	84
2015/16	82	115	110	96
2016/17	80	122	157	152
2017/18	37	91	176	203

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4"

Table 23 provides a data table (see Figure 32) for the 1,018 surgical mesh-related claims by fiscal year of surgery, injury, lodgement and decision. There are six claims where the surgery year is unknown.

Treatment injury (TI) data is available from 1 July 2005, when treatment injury provisions came into law. Therefore, there are no treatment injury claims lodged or decided before 2005/06.

ACC received an increase in claims **lodged** and **decided** in 2017/18, however only 18% (n=37) of the 203 decisions relate to **surgery** in that same year and 45% (n=91) relate to an **injury** in that same year. This means the remaining decisions relate to surgery in previous years.

See Table 24 for more detail on the number of surgical mesh-related claims by **decision** year by **surgery** year.

Table 24: Number of surgical mesh-related claims by decision year by surgery year

Surgical mesh-related claim counts by decision year by surgery year from 1 July 2005 to 30 June 2018														
Mesh implant surgery year	**Decision year**													
	2005/06	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**2015/16**	**2016/17**	**2017/18**	**Total**
Unknown	0	0	0	0	0	0	0	0	0	<4	<4	<4	<4	**6**
1979/80	0	0	0	0	<4	0	0	0	0	0	0	0	0	**~2**
1982/83	0	0	0	0	0	0	0	0	<4	0	0	0	0	**~2**
1986/87	0	0	0	0	0	0	0	0	0	<4	0	0	0	**~2**
1990/91	0	0	0	0	0	0	0	0	0	0	0	0	<4	**~2**
1993/94	0	0	0	0	0	0	0	0	0	<4	0	0	0	**~2**
1996/97	<4	0	0	0	0	0	0	0	0	0	0	0	0	**~2**
1997/98	0	0	<4	0	0	0	0	0	0	0	0	0	0	**~2**
1998/99	0	0	<4	0	0	0	0	0	0	0	0	0	0	**~2**
1999/00	0	0	0	<4	<4	0	<4	0	<4	0	<4	0	<4	**7**
2000/01	0	0	0	<4	<4	<4	0	<4	0	<4	0	<4	<4	**10**
2001/02	0	<4	<4	<4	<4	<4	0	0	0	<4	0	<4	<4	**11**
2002/03	0	<4	<4	0	4	<4	0	0	0	<4	6	<4	<4	**20**
2003/04	0	<4	0	7	4	0	0	<4	<4	<4	<4	<4	<4	**24**
2004/05	4	5	<4	4	5	<4	<4	4	<4	<4	<4	<4	7	**44**
2005/06	<4	12	11	10	5	<4	<4	<4	4	<4	<4	<4	<4	**60**
2006/07		7	18	9	7	0	<4	<4	<4	4	<4	<4	5	**65**
2007/08			8	28	7	<4	<4	5	<4	6	4	4	11	**81**
2008/09				25	25	11	7	6	6	7	<4	9	6	**104**
2009/10					29	11	<4	4	9	9	10	5	4	**84**
2010/11						6	9	9	12	7	8	7	5	**63**
2011/12							5	21	8	8	7	8	8	**65**
2012/13								9	22	7	7	7	19	**71**
2013/14									12	16	6	12	12	**58**
2014/15										5	15	10	8	**38**
2015/16											21	39	23	**82**
2016/17												36	44	**80**
2017/18													37	**37**
Total	**~6**	**29**	**44**	**86**	**91**	**40**	**35**	**68**	**84**	**84**	**96**	**152**	**203**	**1,018**

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To provide approximate totals, "<4" is assumed as 2.

Figure 33: Number of surgical mesh-related claims for POP and/or SUI repair by fiscal year of surgery, injury, lodgement and decision

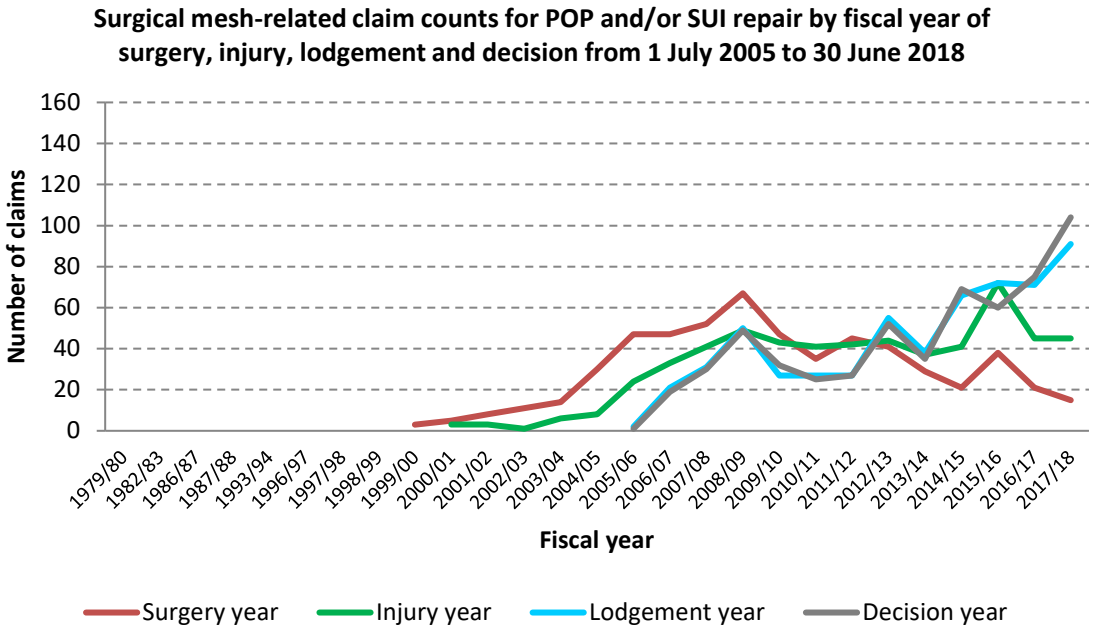


Figure 33 shows the 578 surgical mesh-related claims for POP and/or SUI repair by fiscal year of surgery, injury, lodgement and decision.
ACC definitions of time parameters:

- **Date of surgery** refers to the date of the mesh implant surgery
- **Date of injury** refers to the date the person first seeks or receives treatment for the symptoms of that personal injury. AC Act 2001, section 38, subsection (1) and (2) applies.
- **Date of lodgement** refers to the date the ACC treatment injury claim is lodged.
- **Date of decision** refers to the date ACC issued the decision on the claim.

Sample of time parameters: ACC could make a **decision in 2016/17** on a claim **lodged in 2016/17** for an **injury** that occurred **in 2009/10** for **surgery** that occurred **in 2008/09**.

Of the 578 claims for POP and/or SUI repair, the highest number of claims **lodged** and **decided** is in 2017/18. However the highest peak for claims relating to a particular **surgery** year is in 2008/09. The highest number of claims relating to a particular **injury** year is in 2015/16.

Please note that claims **lodged** in a year may have been **decided** in the same year or, if the claim is more complex, it may have been decided the following year.

See Table 26 for more detail on the number of surgical mesh-related claims for POP and/or SUI repair by **decision** year by **surgery** year.

Table 25: Number of surgical mesh-related claims for POP and/or SUI repair by fiscal year of surgery, injury, lodgement and decision

Surgical mesh-related claim counts for POP and/or SUI repair by surgery, injury, lodgement and decision from 1 July 2005 to 30 June 2018				
Fiscal year	**Claim count in Surgery year**	**Claim count in Injury year**	**Claim count in Lodgement year**	**Claim count in Decision year**
1999/00	<4	0	0	0
2000/01	5	<4	0	0
2001/02	8	<4	0	0
2002/03	11	<4	0	0
2003/04	14	6	0	0
2004/05	30	8	0	0
2005/06	47	24	<4	<4
2006/07	47	33	21	19
2007/08	52	41	31	30
2008/09	67	49	50	49
2009/10	47	43	27	32
2010/11	35	41	27	25
2011/12	45	42	27	27
2012/13	41	44	55	52
2013/14	29	37	38	35
2014/15	21	41	66	69
2015/16	38	72	72	60
2016/17	21	45	71	75
2017/18	15	45	91	104

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4"

Table 25 provides a data table (for Figure 33) for the 578 surgical mesh-related claims for POP and/or SUI repair by fiscal year of surgery, injury, lodgement and decision. There are <4 claims where the surgery year is unknown.

Treatment injury (TI) data is available from 1 July 2005, when treatment injury provisions came into law. Therefore there are no treatment injury claims lodged or decided before 2005/06.

Of the 104 claims for POP and/or SUI repair **decided** in 2017/18, there are 15 claims that relate to **surgery** in that same year and 43% (n=45) of the 104 claims relate to an **injury** that occurs in that same year.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair. The female VMR claim counts are included in this table and are spread across 11 **surgery years** (with the highest claim count for the 2009/10 year), eight **injury years** (with the highest claim count for the 2016/17 year), six **lodgement years** (with the most claims lodged in 2013/14 and 2017/18) and five **decision years** (with the highest claim count for 2017/18).

See Table 26 for more detail on the number of surgical mesh-related claims for POP and/or SUI repair by **decision** year by **surgery** year.

Table 26: Number of surgical mesh-related claims for POP and/or SUI repair by decision year by surgery year

Surgical mesh-related claim counts for POP and/or SUI repair by decision year by surgery year from 1 July 2005 to 30 June 2018														
Mesh implant surgery year	**Decision year**													
	2005/06	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**2015/16**	**2016/17**	**2017/18**	**Total**
Unknown	0	0	0	0	0	0	0	0	0	<4	0	<4	0	**~2**
1999/00	0	0	0	0	0	0	<4	0	0	0	0	0	<4	**~2**
2000/01	0	0	0	0	<4	0	0	0	0	<4	0	<4	<4	**5**
2001/02	0	0	<4	<4	<4	<4	0	0	0	<4	0	<4	<4	**8**
2002/03	0	0	<4	0	<4	<4	0	0	0	<4	<4	<4	<4	**11**
2003/04	0	<4	0	<4	<4	0	0	<4	<4	<4	<4	<4	<4	**14**
2004/05	0	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	5	**30**
2005/06	<4	11	9	5	<4	<4	<4	<4	4	<4	<4	<4	<4	**47**
2006/07		<4	14	6	4	0	<4	<4	<4	<4	<4	<4	<4	**47**
2007/08			<4	17	<4	<4	<4	4	<4	5	4	4	7	**52**
2008/09				14	9	9	5	5	6	7	<4	7	<4	**67**
2009/10					7	5	<4	4	7	8	7	4	<4	**47**
2010/11						<4	5	6	<4	5	6	6	<4	**35**
2011/12							4	14	4	7	5	6	5	**45**
2012/13								8	4	4	4	4	17	**41**
2013/14									<4	14	<4	6	7	**29**
2014/15										5	8	4	4	**21**
2015/16											12	20	7	**38**
2016/17												<4	19	**21**
2017/18													15	**15**
Total	**~2**	**19**	**30**	**49**	**32**	**25**	**27**	**52**	**35**	**69**	**60**	**75**	**104**	**578**

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To provide approximate totals, "<4" is assumed as 2.

Table 27: Number of surgical mesh-related claims for POP and/or SUI repair by mesh implant surgery year by surgery type

Surgical mesh-related claim counts for POP and/or SUI repair by mesh implant surgery year by surgery type from 1 July 2005 to 30 June 2018				
Mesh implant surgery year	**POP repair**	**SUI repair**	**POP & SUI repair**	**Total**
1999/00	0	<4	<4	**~4**
2000/01	0	5	0	**5**
2001/02	<4	5	<4	**~9**
2002/03	<4	4	5	**~11**
2003/04	8	<4	<4	**~12**
2004/05	10	8	12	**29**
2005/06	27	7	13	**47**
2006/07	22	7	18	**47**
2007/08	30	7	15	**52**
2008/09	35	13	19	**67**
2009/10	23	6	18	**47**
2010/11	14	7	14	**35**
2011/12	23	9	13	**45**
2012/13	10	20	11	**41**
2013/14	4	14	11	**29**
2014/15	4	12	5	**21**
2015/16	5	17	16	**39**
2016/17	5	12	4	**21**
2017/18	<4	9	<4	**~13**

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To provide approximate totals, "<4" is assumed as 2.

Table 27 shows the 578 surgical mesh-related claims for POP and/or SUI repair by fiscal year of surgery by surgery type. There are <4 claims where the surgery year is unknown.

ACC data has identified three main surgery types for POP and/or SUI repair which are:

1. Pelvic Organ Prolapse (POP)
2. Stress Urinary Incontinence (SUI) repair
3. Combined Pelvic Organ Prolapse & Stress Urinary Incontinence (POP & SUI) repair (NOTE: Combined POP & SUI repair refers to one single claim for one surgical event to treat both POP and SUI)

Of the 578 claims for POP and/or SUI repair, the highest number of claims (12%, n=67) relate to **surgery** in 2008/09 with POP repair accounting for 52% (n=35) of the 67 claims.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair group and POP repair surgery type. The female VMR claim counts are included in this table and are spread across 11 **surgery** years (with the highest claim count for the 2009/10 year).

Figure 34: Number of surgical mesh-related claims for hernia repair by fiscal year of surgery, injury, lodgement and decision

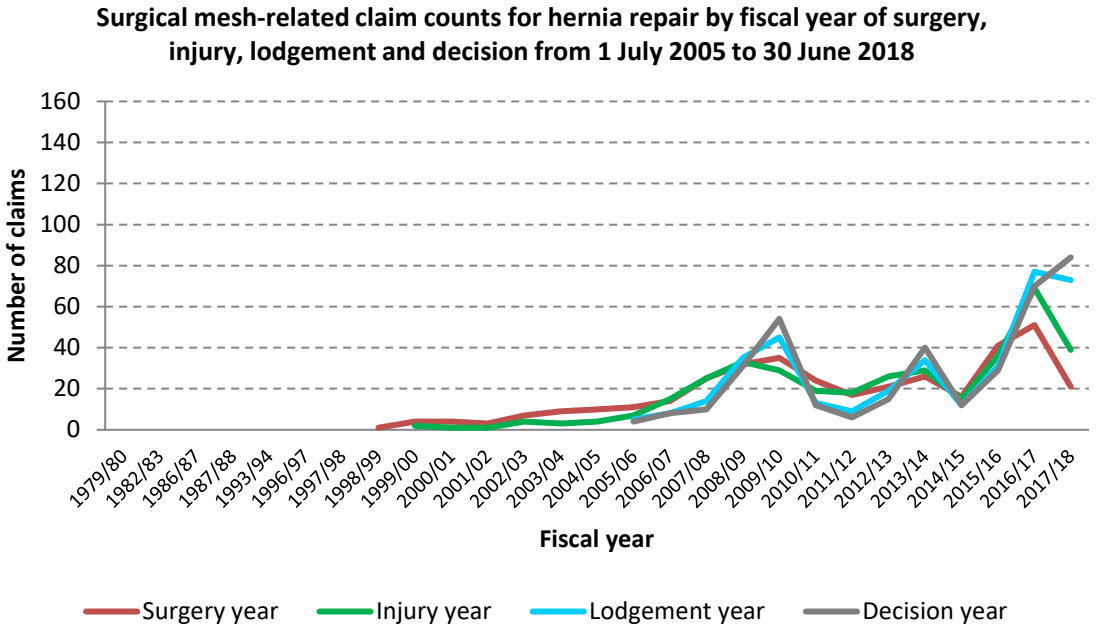


Figure 34 shows the 375 surgical mesh-related claims for hernia repair by fiscal year of surgery, injury lodgmeent and decision.
ACC definitions of time parameters:

- **Date of surgery** refers to the date of the mesh implant surgery
- **Date of injury** refers to the date the person first seeks or receives treatment for the symptoms of that personal injury. AC Act 2001, section 38, subsection (1) and (2) applies.
- **Date of lodgement** refers to the date the ACC treatment injury claim is lodged.
- **Date of decision** refers to the date ACC issued the decision on the claim.

Sample of time parameters: ACC could make a **decision in 2016/17** on a claim **lodged in 2016/17** for an **injury** that occurred **in 2009/10** for **surgery** that occurred **in 2008/09**.

Of the 375 surgical mesh-related claims for hernia repair, there is an increase in claims **lodged** and **decided** in 2009/10 and 2016/17. The highest peak for claims relate to a particular **surgery** year is in 2009/10 and 2016/17. The highest number of claims relate to a particular **injury** year is in 2008/09 and 2016/17.

Please note that claims lodged in a year may have been decided in the same year or, if the claim is more complex, it may have been decided the following year.

See Table 29 for more detail on the number of surgical mesh-related claims for hernia repair by **decision** year by **surgery** year.

Table 28: Number of surgical mesh-related claims for hernia repair by fiscal year of surgery, injury, lodgement and decision

Surgical mesh-related claim counts for hernia repair by fiscal year of surgery, injury, lodgement and decision from 1 July 2005 to 30 June 2018				
Fiscal year	**Claim count in Surgery year**	**Claim count in Injury year**	**Claim count in Lodgement year**	**Claim count in Decision year**
1993/94	<4	0	0	0
1998/99	<4	0	0	0
1999/00	4	<4	0	0
2000/01	4	<4	0	0
2001/02	<4	<4	0	0
2002/03	7	4	0	0
2003/04	9	<4	0	0
2004/05	10	4	0	0
2005/06	11	7	5	4
2006/07	14	15	8	8
2007/08	25	25	14	10
2008/09	32	33	35	31
2009/10	35	29	45	54
2010/11	24	19	13	12
2011/12	17	18	9	6
2012/13	21	26	19	15
2013/14	26	29	34	40
2014/15	16	15	12	12
2015/16	41	36	31	29
2016/17	51	69	77	70
2017/18	21	39	73	84

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4"

Table 28 provides a data table (for Figure 34) for the 375 surgical mesh-related claims for hernia repair by fiscal year of surgery, injury, lodgement and decision. There are <4 claims where the surgery year is unknown.

Treatment injury (TI) data is available from 1 July 2005, when treatment injury provisions came into law. Therefore, there are no treatment injury claims lodged or decided before 2005/06.

Of the 84 claims for hernia repair **decided** in 2017/18, 27% (n=21) of claims relate to **surgery** in that same year and 46% (n=39) of claims relate to an **injury** that occurs in that same year.

Note that the number of **decided** hernia repair claims where **surgery** and the **injury** appear in the same year is higher compared to POP and/or SUI repairs. This finding could suggest that the injury related to hernia repair may develop earlier or be quicker to diagnose, given that the primary injury for hernia repair are infections, whereas the primary injury for POP and/or SUI repair is mesh erosion.

See Table 29 for more detail on the number of surgical mesh-related claims for hernia repair by **decision** year by **surgery** year.

Table 29: Number of surgical mesh-related claims for hernia repair claims by decision year by surgery year

Surgical mesh-related claim counts for hernia repair claims by decision year by surgery year from 1 July 2005 to 30 June 2018														
Mesh implant surgery year	**Decision year**													
	2005/06	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2011/12**	**2012/13**	**2013/14**	**2014/15**	**2015/16**	**2016/17**	**2017/18**	**Total**
Unknown	0	0	0	0	0	0	0	0	0	0	<4	0	<4	**~2**
1993/94	0	0	0	0	0	0	0	0	0	<4	0	0	0	**~2**
1998/99	0	0	<4	0	0	0	0	0	0	0	0	0	0	**~2**
1999/00	0	0	0	<4	<4	0	0	0	<4	0	<4	0	0	**4**
2000/01	0	0	0	<4	<4	0	0	<4	0	0	0	0	<4	**4**
2001/02	0	<4	0	0	0	0	0	0	0	0	0	0	<4	**~2**
2002/03	0	<4	<4	0	<4	0	0	0	0	0	<4	0	0	**7**
2003/04	0	<4	0	<4	<4	0	0	<4	0	<4	0	0	0	**9**
2004/05	4	0	0	<4	<4	0	0	<4	<4	0	0	<4	<4	**10**
2005/06	0	<4	<4	4	<4	<4	<4	0	0	0	0	0	0	**11**
2006/07		4	<4	<4	<4	0	0	0	0	<4	0	0	<4	**14**
2007/08			4	10	4	<4	0	<4	<4	<4	0	0	<4	**25**
2008/09				9	16	<4	<4	<4	0	0	0	<4	<4	**32**
2009/10					21	5	0	0	<4	<4	<4	<4	<4	**35**
2010/11						4	<4	<4	8	<4	<4	<4	<4	**24**
2011/12							<4	6	4	0	<4	<4	<4	**17**
2012/13								<4	13	<4	<4	<4	<4	**21**
2013/14									10	<4	4	6	4	**26**
2014/15										0	6	6	4	**16**
2015/16											8	18	15	**41**
2016/17												31	20	**51**
2017/18													21	**21**
Total	**4**	**~12**	**10**	**31**	**54**	**12**	**6**	**15**	**40**	**12**	**29**	**70**	**84**	**375**

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To provide approximate totals, "<4" is assumed as 2.

Table 30: Number of surgical mesh-related claims for hernia repair by mesh implant surgery year by surgery type

Surgical mesh-related claim counts for hernia repair by mesh implant surgery year by surgery type from 1 July 2005 to 30 June 2018				
Mesh implant surgery year	**Groin hernia repair**	**Ventral hernia repair**	**Other hernia repair**	**Total**
1993/94	0	<4	0	**~2**
1998/99	0	<4	0	**~2**
1999/00	<4	<4	0	**~4**
2000/01	<4	<4	0	**~4**
2001/02	<4	<4	0	**~4**
2002/03	4	<4	0	**~6**
2003/04	4	5	0	**9**
2004/05	<4	7	<4	**~11**
2005/06	4	7	0	**11**
2006/07	7	5	<4	**~14**
2007/08	13	12	0	**25**
2008/09	11	15	6	**32**
2009/10	12	23	0	**35**
2010/11	5	18	<4	**~25**
2011/12	6	10	<4	**~18**
2012/13	4	17	0	**21**
2013/14	11	15	0	**26**
2014/15	4	10	<4	**~16**
2015/16	18	21	<4	**~41**
2016/17	18	25	8	**51**
2017/18	<4	18	<4	**~22**

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4". To provide approximate totals, "<4" is assumed as 2.

Table 30 shows the 375 surgical mesh-related claims for hernia repair by fiscal year of surgery by surgery type. There are <4 claims where the surgery year is unknown.
ACC data has identified three main surgery types for hernia repair, which is:

1. Groin hernia repair
2. Ventral hernia repair
3. 'Other' hernia repair (This includes hiatus hernia, perineal hernia, parastomal hernia or the hernia type is unknown).

Of the 375 claims for hernia repair, the highest number of claims relate to **surgery** is in 2016/17 with ventral hernia repair accounting for 49% (n=25) of the 67 claims.

Figure 35: Median number of days between date of surgery and injury, date of injury and lodgement, date of lodgement and decision from 1 July 2005 to 30 June 2018

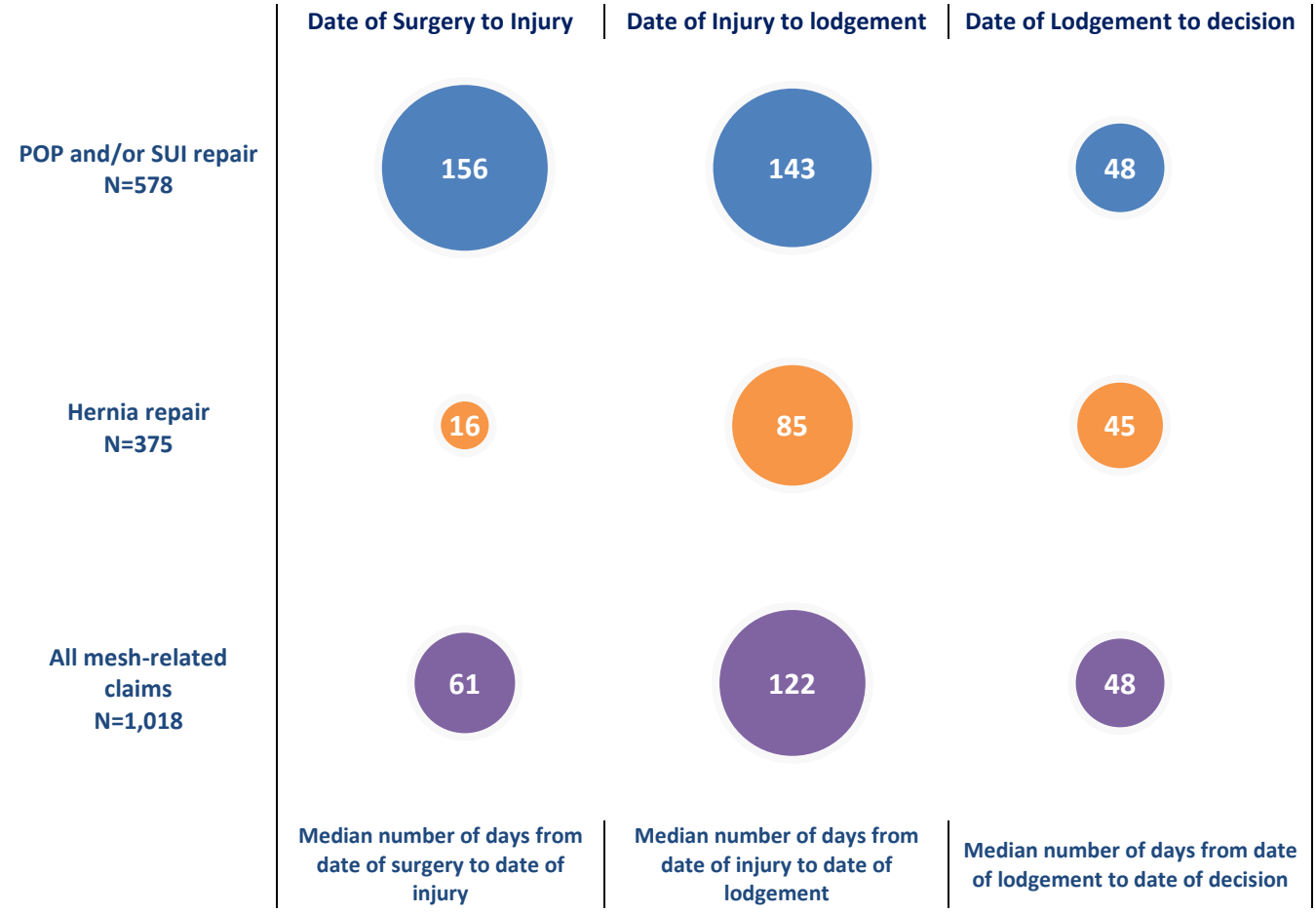


Figure 35 shows the median number of days between specific key time points for the 1,018 surgical mesh-related claims. The 1,018 claims are also broken down by POP and/or SUI repair claims (578) and hernia repair claims (375).

The number of days between each key time point provides information about lag times e.g. the Date of surgery to the Date of injury provides information about the lag time between the mesh surgery and the date at which a client first seeks treatment for their symptoms.
ACC definitions of time parameters:

- Date of surgery (DOS) refers to the date of the mesh implant surgery.
- Date of injury (DOI) refers to the date the person first seeks or receives treatment for the symptoms of that personal injury. AC Act 2001, section 38, subsection (1) and (2) applies.
- Date of lodgement (DOL) refers to the date the ACC treatment injury claim is lodged.
- Date of decision (DOD) refers to the date ACC issued the decision on the claim.

Median is the “middle” value in a set of data. It has been noted that the data distribution of above time parameters is not symmetric with a few extremely large values which can skew numbers. For this reason,

average days are not used as it's not a fair representation of the data and can be misleading. Therefore, the median of these time parameters is used to describe the timeframe as it provides a better picture of the data distribution.

For all mesh-related surgeries, the median days from DOS to DOI is 61 days (ranging from 0 to 9,531 days). This means 50% of all surgical mesh-related claims developed symptoms in 61 days.

When broken down by surgery type groups, it shows that the median number of days for claims relates to POP and/or SUI repair is 156 days (ranging from 0 to 6489 days), which is higher than the median of 16 days (ranging from 0 to 7145 days) for claims relates to hernia repair.

The median number of days between DOI to DOL for POP and/SUI repair is 143 days (ranging from 0 to 6287 days). This also differs for claims relating to hernia repair, which is 85 days (ranging from 0 to 5847 days).

The median days between the DOL and DOD shows the timeframe of ACC's decision making for surgical mesh-related claims. The Accident Compensation Act 2001 determines treatment injury claims to be complicated claims and provides nine months for a cover decision to be made under section 57(4). Even though the legislation provides nine months, ACC is focused on issuing a decision to our clients as soon as possible.

The data shows that 50% (n=509) of the 1,018 surgical mesh-related claims had a decision within 48 days and the timeframe of ACC's decision making is similar across the different surgery type groups.

Several claims are lodged without sufficient supporting clinical evidence. The timeframe for decision making mainly depends on the level of claim complexity and how quickly ACC can receive the relevant clinical evidence from the health providers. E.g. As noted in Figure 9, the increases in claims lodged in 2016/17 and 2017/18 has contributed to an increase in timeframes, as claims were lodged without sufficient supporting clinical evidence which means ACC spends more time collecting relevant clinical evidence to make a decision.

Table 31: Median number of days between date of surgery and injury, date of injury and lodgement, date of lodgement and decision

Median timeframe between Date of Surgery (DOS) to Date of Injury (DOI), DOI to Date of Lodgement (DOL) and DOL to Date of Decision (DOD) by fiscal year from 1 July 2005 to 30 June 2018				
Fiscal year	**Decision counts**	**DOS to DOI**	**DOI to DOL**	**DOL to DOD**
2005/06	6	104	57	59
2006/07	29	84	141	29
2007/08	44	52	72	39
2008/09	86	32	126	36
2009/10	91	15	64	42
2010/11	40	129	144	50
2011/12	35	184	84	28
2012/13	68	105	185	54
2013/14	84	61	262	62
2014/15	84	165	195	46
2015/16	96	251	80	42
2016/17	152	26	120	55
2017/18	203	63	109	62

Table 31 shows the 1,018 surgical mesh-related claims broken down by the number of decisions made in that fiscal year and the associated median timeframe from DOS to DOI, DOI to DOL and DOL to DOD.
ACC definitions of time parameters:

- Date of surgery (DOS) refers to the date of the mesh implant surgery.
- Date of injury (DOI) refers to the date the person first seeks or receives treatment for the symptoms of that personal injury. AC Act 2001, section 38: subsection (1) and (2) applies.
- Date of lodgement (DOL) refers to the date the ACC treatment injury claim is lodged.
- Date of decision (DOD) refers to the date ACC issued the decision on the claim.

The number of median days between each key time point provides information about lag times.
Median is the “middle” value in a set of data.

For the 203 decisions made in 2017/18, the median timeframe from DOS to DOI is 63 days. This is a vast decrease from the 251 days for 96 decisions in 2015/16. This could be due to patients being more aware of possible complications relating to the use of surgical mesh.

There is an increase in the median timeframe from DOI to DOL in 2016/17 then it dips slightly in 2017/18 from 120 days to 109. However the timeframe in 2016/17 and 2017/18 are still lower than in 2014/15.

The timeframe for decision-making mainly depends on the level of claim complexity and how quickly ACC can receive the relevant clinical evidence from the health providers. E.g. As noted in Figure 9, the increases in claims lodged in 2016/17 and 2017/18 has contributed to an increase in timeframes as claims were lodged without sufficient supporting clinical evidence, which means ACC spends more time collecting relevant clinical evidence to make a decision.

Table 32: Median number of days between date of surgery and injury, date of injury and lodgement, date of lodgement and decision for POP and/or SUI repair claims by fiscal year

Median timeframe between Date of Surgery (DOS) to Date of Injury (DOI), DOI to Date of Lodgement (DOL) and DOL to Date of Decision (DOD) for POP and/or SUI repair claims by fiscal year from 1 July 2005 to 30 June 2018				
Fiscal year	**Decision counts**	**DOS to DOI**	**DOI to DOL**	**DOL to DOD**
2005/06	<4	207	10	81
2006/07	19	127	143	29
2007/08	30	57	90	38
2008/09	49	45	132	38
2009/10	32	143	77	46
2010/11	25	346	140	41
2011/12	27	441	88	22
2012/13	52	144	178	50
2013/14	35	262	486	45
2014/15	69	173	178	35
2015/16	60	734	84	41
2016/17	75	107	167	77
2017/18	104	246	106	56

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4"

Table 32 shows the 578 surgical mesh-related claims for POP and/or SUI repair broken down by the number of decisions made in that fiscal year and the associated median timeframe from DOS to DOI, DOI to DOL and DOL to DOD. ACC definitions of time parameters:

- Date of surgery (DOS) refers to the date of the mesh implant surgery.
- Date of injury (DOI) refers to the date the person first seeks or receives treatment for the symptoms of that personal injury. AC Act 2001, section 38, subsection (1) and (2) applies.
- Date of lodgement (DOL) refers to the date the ACC treatment injury claim is lodged.
- Date of decision (DOD) refers to the date ACC issued the decision on the claim.

In 2017/18, the median timeframe from DOI to DOL is 106 days for the 104 decisions made. This is an improvement from the 167 days in 2016/17, and may relate to increased awareness.

Overall, the median number of days between DOL and DOD is relatively stable, except for an increase in 2016/17.

Ventral Mesh Rectopexy (VMR) has been recently added as a new value in ACC's data. In order to be consistent with the previous report, the female VMR claims are reported under POP and/or SUI repair. Of the 578 claims, 13 relate to female VMR. There are low claim counts across the fiscal years so we are unable to provide this level of detail. However, the earliest decision relating to female VMR is in 2008/09. Of the 13 claims, five (38%) are decided in 2017/18.

The timeframe for decision making mainly depends on the level of claim complexity, whether sufficient clinical evidence is provided to ACC at the time of lodgement and how quickly ACC can receive the relevant clinical evidence from the health providers.

Table 33 Time (in months) between date of surgery and date of injury for mesh erosion claims related to POP and/or SUI repair

Time (in months) between Date of Surgery and Date of Injury for mesh erosion claims related to POP and/or SUI repair from 1 July 2005 to 30 June 2018			
Months	**Claim counts**	**% of claims**	**% accumulated**
0-1	50	14%	14%
1-2	40	11%	26%
2-3	20	6%	31%
3-4	19	5%	37%
4-5	12	3%	40%
5-6	10	3%	43%
6-7	8	2%	45%
7-8	6	2%	47%
8-9	6	2%	48%
9-10	<4	-%	49%
10-11	<4	-%	50%
11-12	7	2%	52%
13-24	29	8%	60%
25-36	24	7%	67%
37-48	23	7%	73%
49-60	20	5%	79%
>60	75	21%	100%

Note: 1 month = 30 days; claim counts fewer than four (n=1, 2 or 3) are presented as "<4"

Table 33 shows the 354 claims where the primary injury is mesh erosion and the time (in months) between the DOS and DOI. (Note: there are two claims (of 354) where ACC didn't have the date of surgery)

ACC definitions of time parameters:

- Date of surgery (DOS) refers to the date of the mesh implant surgery.
- Date of injury (DOI) refers to the date the person first seeks or receives treatment for the symptoms of that personal injury. AC Act 2001, section 38, subsection (1) and (2) applies.
- Date of lodgement (DOL) refers to the date the ACC treatment injury claim is lodged.
- Date of decision (DOD) refers to the date ACC issued the decision on the claim.

It is noted that 21% (n=75) of mesh erosion became symptomatic more than five years after the mesh surgery and 52% (n=183) within one year following the surgery.

Table 34: Median number of days between date of surgery and injury, date of injury and lodgement, date of lodgement and decision for hernia repair claims by fiscal year

Median timeframe between Date of Surgery (DOS) to Date of Injury (DOI), DOI to Date of Lodgement (DOL) and DOL to Date of Decision (DOD) for hernia repair claims by fiscal year from 1 July 2005 to 30 June 2018				
Fiscal year	**Decision counts**	**DOS to DOI**	**DOI to DOL**	**DOL to DOD**
2005/06	4	132	57	58
2006/07	8	52	55	26
2007/08	10	59	23	38
2008/09	31	15	136	26
2009/10	54	10	51	35
2010/11	12	31	85	49
2011/12	6	23	51	27
2012/13	15	25	230	91
2013/14	40	24	128	87
2014/15	12	285	177	56
2015/16	29	17	101	66
2016/17	70	13	78	36
2017/18	84	28	79	58

Table 34 shows the 375 surgical mesh-related claims for hernia repair broken down by the number of decisions made in that fiscal year and the associated median timeframe from DOS to DOI, DOI to DOL and DOL to DOD. ACC definitions of time parameters:

- Date of surgery (DOS) refers to the date of the mesh implant surgery.
- Date of injury (DOI) refers to the date the person first seeks or receives treatment for the symptoms of that personal injury. AC Act 2001, section 38, subsection (1) and (2) applies.
- Date of lodgement (DOL) refers to the date the ACC treatment injury claim is lodged.
- Date of decision (DOD) refers to the date ACC issued the decision on the claim.

The days from DOS to DOI are relatively stable and low over several years, except for the 285 days in 2014/15. A median value of 285 days means that of the 12 claims decided in 2014/15, 50% (n=6) of them developed an injury more than nine months after the surgery. In contrast, of the 70 claims decided in 2016/17, 50% (n=35) developed an injury in less than two weeks after surgery.

The median timeframe from DOI to DOL is similar between 2016/17 and 2017/18, and an improvement over the previous four fiscal years (2012/13 to 2015/16).

The timeframe for decision making mainly depends on the level of claim complexity;, whether sufficient clinical evidence is provided to ACC at the time of lodgement, and how quickly ACC can receive the relevant clinical evidence from the health providers.

Table 35: Time (in months) between date of surgery and date of injury for infection claims related to hernia repair

Time (in months) between Date of Surgery and Date of Injury for infection claims related to hernia repair from 1 July 2005 to 30 June 2018			
Months	**Claim counts**	**% of claims**	**% accumulated**
0-1	109	66%	66%
1-2	13	8%	74%
2-3	<4	-%	76%
3-4	5	3%	79%
4-5	<4	-%	80%
5-6	<4	-%	81%
6-7	<4	-%	82%
7-8	0	0%	82%
8-9	<4	-%	82%
9-10	<4	-%	83%
10-11	<4	-%	83%
11-12	0	0%	83%
13-24	6	4%	87%
25-36	<4	-%	88%
37-48	8	5%	93%
49-60	7	4%	97%
>60	5	3%	100%

Note: Claim counts fewer than four (n=1, 2 or 3) are presented as "<4 (-%)"

Table 35 shows the 165 claims where the primary injury is infection and the time (in months) between the DOS and DOI.

ACC definitions of time parameters:

- Date of surgery (DOS) refers to the date of the mesh implant surgery.
- Date of injury (DOI) refers to the date the person first seeks or receives treatment for the symptoms of that personal injury. AC Act 2001, section 38, subsection (1) and (2) applies.
- Date of lodgement (DOL) refers to the date the ACC treatment injury claim is lodged.
- Date of decision (DOD) refers to the date ACC issued the decision on the claim.

It is noted that 3% (n=5) of infections became evident more than five years after the mesh surgery, and 66% (n=109) of infections is evident within one month following the surgery.