

# Section 100 Review of the Lifetime Care and Support (Catastrophic Injuries) Act 2014

ACT Lifetime Care and Support Scheme

November 2019



1 November 2019

Ms Lisa Holmes  
Lifetime Care and Support Commissioner  
Chef Minister, Treasury and Economic Development Directorate  
ACT Government  
Level 1, Canberra Nara Centre  
Canberra ACT 2601

Dear Lisa

## Section 100 Review of the Lifetime Care and Support (Catastrophic Injuries) Act 2014

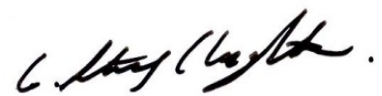
We are pleased to provide our report consistent with the reporting obligations of Section 100 of the Lifetime Care and Support (Catastrophic Injuries) Act 2014.

We look forward to discussing this report with you.

Yours sincerely

A handwritten signature in black ink, appearing to read "Gillian Harrex".

Gillian Harrex

A handwritten signature in black ink, appearing to read "Antony Cloughton".

Antony Cloughton

**Fellows of the Institute of Actuaries of Australia**

### Sydney

Tel +61 2 8252 3300  
Level 7, 68 Harrington Street  
The Rocks, NSW 2000

Finity Consulting Pty Limited

### Melbourne

Tel +61 3 8080 0900  
Level 3, 30 Collins Street  
Melbourne, VIC 3000

ABN 89 111 470 270

### Auckland

Tel +64 9 306 7700  
Level 5, 79 Queen Street  
Auckland 1010

[finity.com.au](http://finity.com.au) / [finityconsulting.co.nz](http://finityconsulting.co.nz)

# Section 100 Review of the Lifetime Care and Support (Catastrophic Injuries) Act 2014

<b>Part I Detailed Findings .....</b>	<b>3</b>
<b>1 Background and Approach.....</b>	<b>3</b>
1.1 Scope of the Review.....	3
1.2 Background.....	3
1.3 Scheme to Date .....	4
1.4 Financial Position.....	5
<b>2 Objective 7(a) Part 1 .....</b>	<b>6</b>
2.1 Participant demographics .....	6
2.2 Comparison to other schemes.....	10
2.3 Treatment and care payments made for current participants .....	12
2.4 Conclusions .....	14
<b>3 Objective 7(b) .....</b>	<b>15</b>
3.1 Drivers of LTCS levy.....	15
3.2 Comparison to other jurisdictions .....	18
3.3 Conclusions .....	19
<b>4 Reliances and Limitations.....</b>	<b>20</b>
4.1 Reliance on Data and Other Information .....	20
4.2 Limitations on Use .....	20
<b>Part II Appendices .....</b>	<b>21</b>
<b>A Terms of Reference .....</b>	<b>21</b>
<b>B Data .....</b>	<b>22</b>

# Part I Detailed Findings

## 1 Background and Approach

### 1.1 Scope of the Review

The Lifetime Care and Support (Catastrophic Injuries) Act 2014 (LTCS Act) took effect from 1 July 2014. Under section 100 of the CTP Act:

- (1) *The Minister must review the operation of this Act as soon as practicable after the end of its 5th year of operation.*
- (2) *The Minister must present a report of the review to the Legislative Assembly within 3 months after the day the review is started.*

For the purpose of complying with the requirements of the Section 100 review (the review) the Minister has approved Terms of Reference (ToR, Appendix A). Finity Consulting (Finity) has been engaged to respond to Objective 7(a) Part 1 and Objective 7(b) of the ToR.

This report has been compiled by Finity, in its role as the Scheme actuary. It is intended to fulfil a number of the requirements of the review and in particular, to provide an independent report on the quantitative elements - Objective 7(a) Part 1 and Objective 7(b) - of the ToR. The report particularly focuses on the quantitative aspects of the Lifetime Care and Support Scheme (LTCSS) and the experience to 30 June 2019.

### 1.2 Background

In the ACT:

- Compulsory Third Party (CTP) insurance is currently provided under a fault-based scheme based on the law of tort. This is referred to as the CTP scheme. The system is privatised, with 4 insurers currently participating in the Scheme.
- Workers' compensation insurance for private sector employees is provided under a no-fault based scheme. This is referred to as the Workers' Compensation Scheme. The Workers' Compensation Scheme in the ACT is privately underwritten and currently comprises 7 insurers and 8 self-insurers.
- Effective from 1 July 2014, the Lifetime Care and Support Scheme (ACT LTCSS, the Scheme) came into being. The ACT LTCSS initially covered persons catastrophically injured in motor vehicle accidents involving a registered motor vehicle if the injury occurs on a public road within the territory and meets the serious injury criteria (the motor injuries stream). From 1 July 2016 the ACT LTCSS was extended to cover private sector employees catastrophically injured at work in the ACT (the work injuries stream).
- Administration of the ACT LTCSS benefits to ACT participants is performed by the NSW Lifetime Care and Support Authority (NSW LTCSA) under a memorandum of understanding between the ACT and NSW governments.



### 1.3 Scheme to Date

As at 30 June 2019, 12 applicants have been accepted into the two streams as participants with one further pending potential participant. 10 of the participants had been accepted into the motor injuries stream, and 2 had been accepted into the work injuries stream. The pending applicant, who has since been accepted as a participant, suffered a work injury. Throughout this report we have treated the pending participant as if they had been accepted into the Scheme at 30 June 2019.

Table 1.1 shows the expected participant characteristics of the Scheme up to 30 June 2019 based on the original levy calculations completed for the 2014/15 to 2018/19 years<sup>1</sup>.

**Table 1.1 – Expected Scheme participant characteristics  
(averages since inception of each stream)**

Characteristic	Motor Injuries	Work Injuries	Total
Expected Participants per annum			
Numbers Joining	4.4	1.4	<b>5.8</b>
% Traumatic Brain Injury	75%	71%	<b>74%</b>
% Spinal Injury	24%	27%	<b>25%</b>
% Other Injuries	1%	2%	<b>1%</b>
Cost per Participant (inflated & discounted)	\$2.5m	\$2.6m	<b>\$2.6m</b>

Across the life of the Scheme to 30 June 2019, the average expected number of motor injury participants per year has been 4.4, and for work injury participants it has been 1.4. The current estimates for the 2019/20 year are 3.6 motor injuries and 1.25 work injuries. Given the extremely small numbers of expected participants we would expect there to be considerable volatility in the numbers of participants from year to year.

The expected cost per participant is based on models of expected cash flows that allow for changing service needs over time. The inputs to the benchmark package include age at injury, primary injury, injury severity and duration post-accident. The models separately estimate the expected cash flows for the various types of services provided, including attendant care, hospital, home modification, and case management. Each future claim is assigned a probability for each combination of primary injury, age at injury and injury severity, which combined with the model's expected costs, gives a cost for an average future participant.

The cost per participant allows for inflation and discounting, using the original inflation and investment return assumptions. The costs per participant have been inflated to 30 June 2019, to give an inflated and discounted value as at 30 June 2019.

It is important to note that the scheme currently uses a discount rate in line with expected future investment earnings. Proposed changes to accounting standards may in the future require the use of a risk free discount rate. If this change is made, then based on prevailing discount rates, the expected costs would increase materially on an accounting basis.

The small difference in the expected characteristics of the motor and work injuries streams' participants reflects that the work injuries stream covers only participants injured while of working age, while participants of any age can be injured in a motor accident. The following sections discuss the actual experience to date of the two streams.

<sup>1</sup> Table 1.1 shows the combined view based on the individual estimates of the 2014/15 to 2018/19 years. The current estimates for the 2019/20 year vary from the estimates for the 2014/15 to 2018/19 years as they are based on new forecasts.

Table 1.2 shows the actual motor and work levies charged by year to cover the expected costs of the Scheme for that year (for the motor injuries stream the levy is expressed as a cost per vehicle, while the work injuries levy has been shown as the total levy payable by the industry).

**Table 1.2 – Levies charged by year**

Levy Year	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Motor Injuries Stream (cost per vehicle)	\$34.00	\$34.00	\$35.00	\$35.00	\$36.50	\$37.00
Work Injuries Levy:			\$3.8m	\$3.8m	\$3.8m	\$3.8m

*The information in this report has been presented at a high level due to privacy concerns given the small number of participants accepted to date, especially for the work injuries stream.*

## 1.4 Financial Position

Table 1.3 shows the balance sheet of the Scheme as at 30 June 2019. There are currently net assets of \$18.1 million, which have grown from \$10.4 million at 30 June 2018. The vast majority of the liabilities relate to the outstanding claims liabilities for Scheme participants.

**Table 1.3 – Balance Sheet at 30 June 2019**

	Balance Sheet		Annual
	2019	2018	Change
	\$m	\$m	\$m
<b>Assets</b>			
Current Assets	3.73	3.60	0.14
Non-current Assets	61.99	43.78	18.21
Total Assets	65.72	47.38	18.34
<b>Liabilities</b>			
Current Liabilities	2.38	1.77	0.61
Non-current Liabilities	45.22	35.19	10.03
Total Liabilities	47.60	36.95	10.65
<b>Net Assets</b>	<b>18.12</b>	<b>10.43</b>	<b>7.70</b>

As the Scheme is in its infancy, it will be many years before the Scheme reaches 'maturity' and so we would expect the Scheme assets to increase materially into the future.

## 2 Objective 7(a) Part 1

The Scheme commenced on 1 July 2014 and given its relative immaturity, significant uncertainty with respect to the actual utilisation of funded supports exists and will exist for some time. In addition, the extremely small numbers of participants from year to year means that considerable volatility will be a feature of the Scheme.

### 2.1 Participant demographics

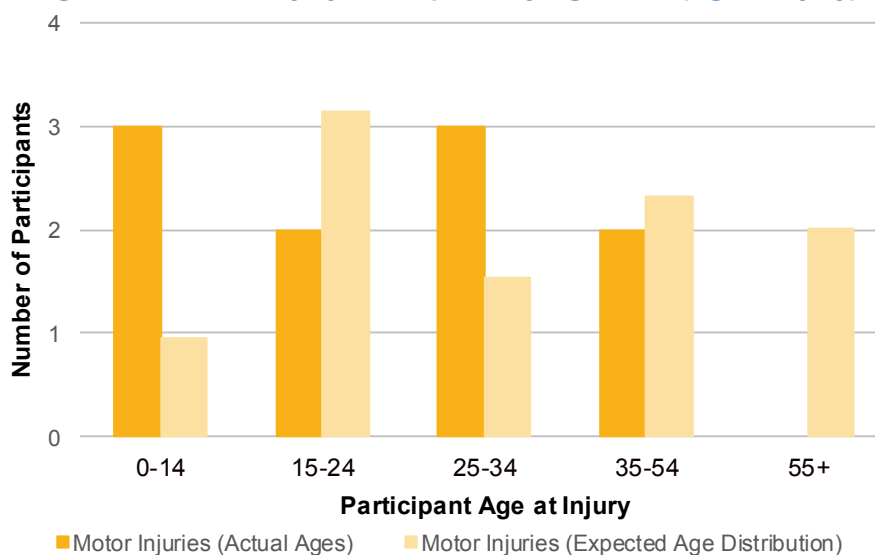
*Objective 7A Part 1(a): provide an analysis and statistical profile of scheme participants, including by participant injury type*

Figure 2.1 to Figure 2.7 set out the experience of the Scheme to date, and the profile of the participants that have been accepted. We have included the pending work injury participant in these tables. In total there have been 10 motor injury participants and 3 work injury participants to 30 June 2019. Actual data shown is to 30 June 2019 and expected allocations are based on Finity assumptions as at 30 June 2019.

The number of motor injuries each year is higher than the number of work injuries, reflecting the general expectation that motor injuries will account for a greater overall proportion of catastrophic injuries than work injuries. This is, potentially, exacerbated by the mix of industry types in the ACT, being predominantly lower risk industries.

Figure 2.1 and Figure 2.2 show the distribution by age at injury for the motor and work injury streams respectively. Participants are shown using their actual age at injury, and using the expected age distribution for new injuries in 2019/20<sup>2</sup>. These charts highlight the challenges presented by the extremely small numbers of participants to date.

**Figure 2.1 – Motor Injury Participants by Age Band (Age at Injury)**

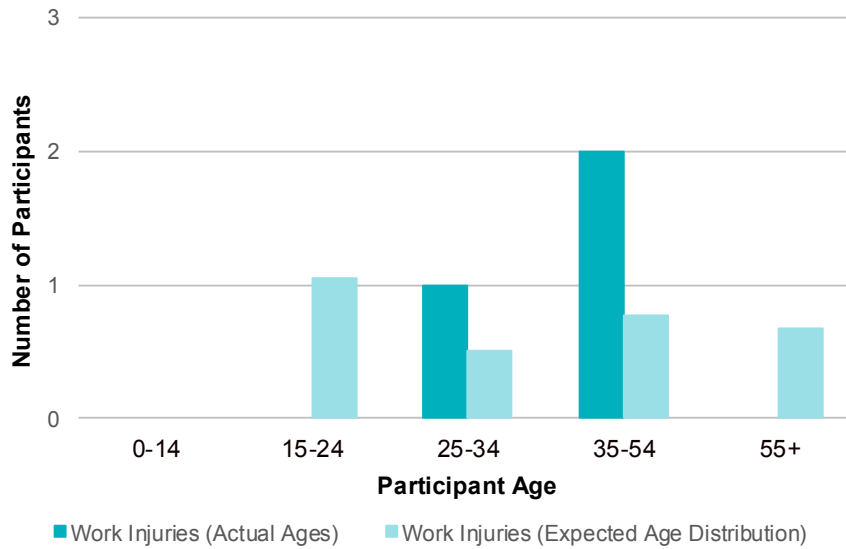


*Expected Age Distribution is the actual participants reported redistributed by the expected 2019/20 age distribution*

To date motor vehicle participants have been spread across most age groups with a number of motor injury participants being children under 15. There is significant volatility between age categories due to the small number of injuries to date.

<sup>2</sup> Based on the assumed distribution from the 2019/20 levy calculations

**Figure 2.2 – Work Injury Participants by Age Band (Age at Injury)**

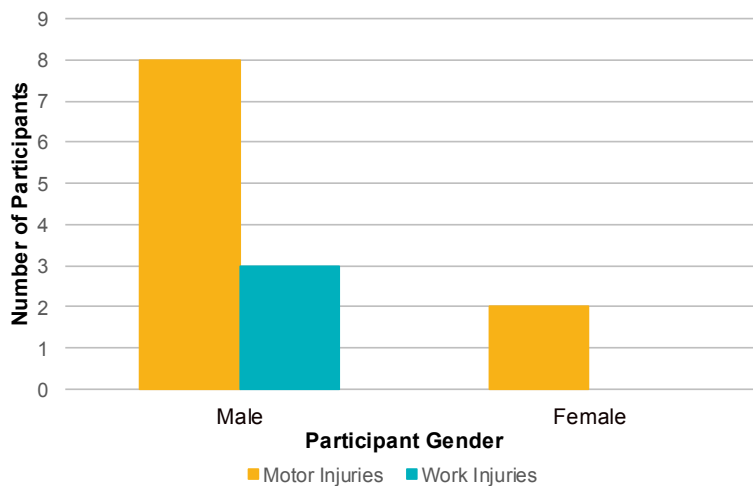


*Expected Age Distribution is the actual participants reported redistributed by the expected 2019/20 age distribution*

With only three work injury participants to date very little can be concluded from Figure 2.2. The levy work assumes that all work injury participants will be aged 16 to 65 at the time of injury, and to date they have all been aged 25 to 54.

Figure 2.3 provides a breakdown of participants by gender.

**Figure 2.3 – Participants split by gender**

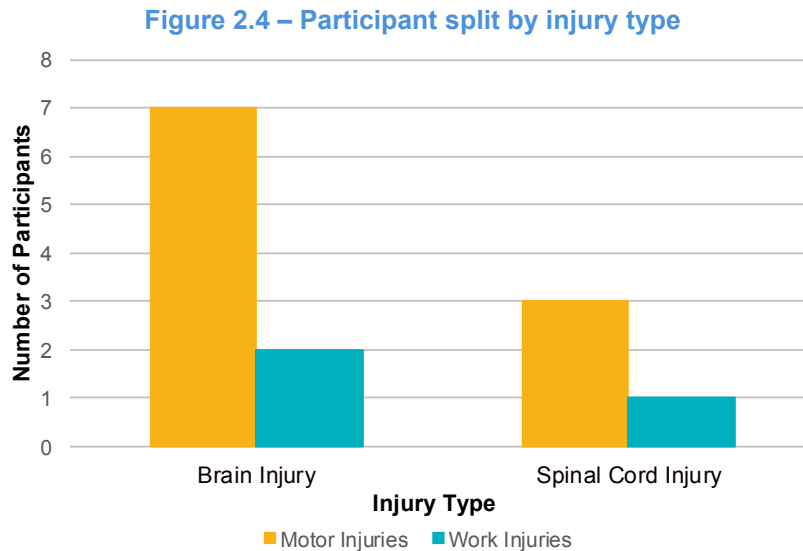


The bulk of participants have been male. Male drivers have historically suffered a much greater proportion of severe motor injuries. The proportion of male participants in the ACT LTCSS is 85%, which is broadly in-line with the experience to date for the schemes in NSW and Queensland, where 72% and 79% of the participants of the respective schemes are male<sup>3</sup>.

<sup>3</sup> As at 30/6/2017 for NSW and 31/3/19 for Queensland



Figure 2.4 provides details on the type of injury experienced by Scheme participants.

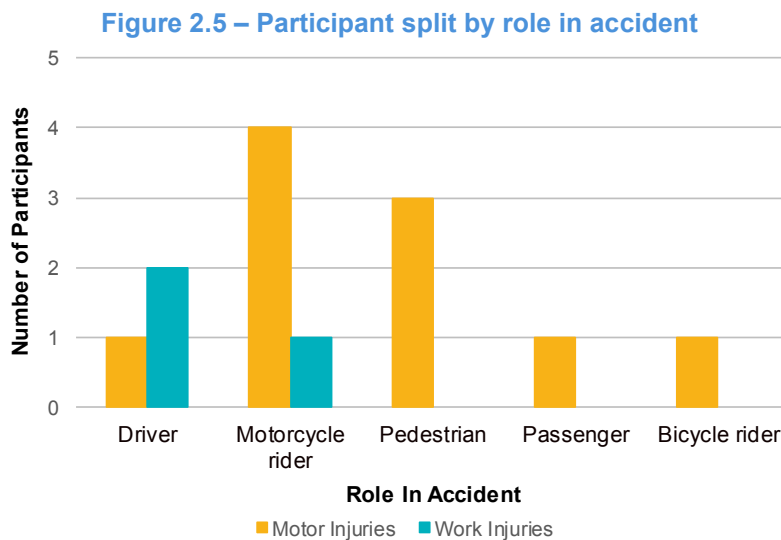


Almost 70% of participants to date have suffered a brain injury. A higher incidence of brain injuries is expected based on historical experience observed in other jurisdictions and countries. The frequency for both traumatic brain and spinal cord injury types seen so far is broadly in line with expectations (shown in Table 2.1).

**Table 2.1 – Expected participant split by injury type<sup>4</sup>**

Injury Type	Motor Injuries	Work Injuries	Scheme Average
Brain Injury	75%	71%	<b>74%</b>
Spinal Cord Injury	24%	27%	<b>25%</b>
Other	1%	2%	<b>1%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Figure 2.5 shows the split of injuries by role. For the participants that have been accepted into the work injuries stream, all work injuries were from motor accidents that occurred in the course of their employment with two being journey claims.

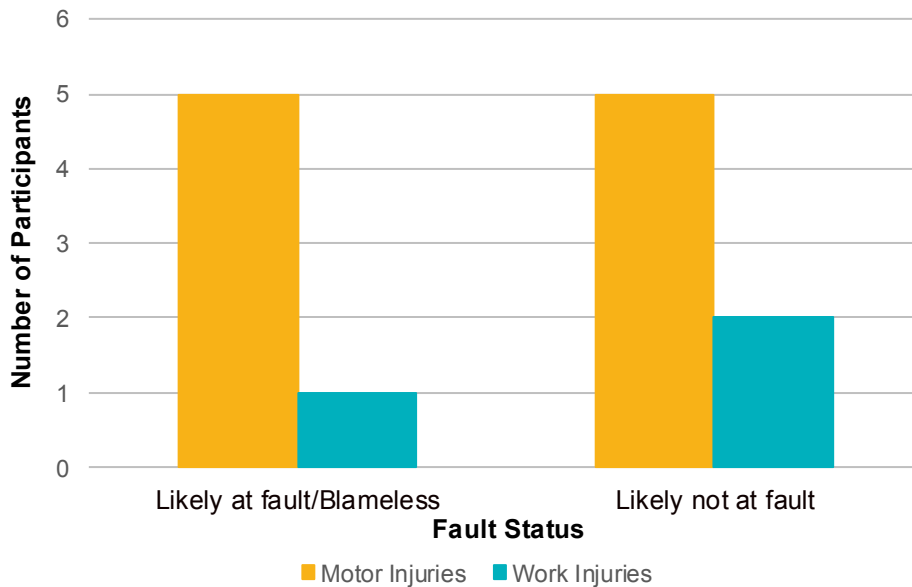


<sup>4</sup> Table 2.1 shows the expected proportion of scheme participants by injury type over the 2014/15 to 2018/19 period.

From a legal perspective, all participants are either at fault or not at fault, with degrees of contributory negligence in some situations. Being “at fault” covers situations where the participant was predominantly or totally at fault (e.g. they made a mistake while driving), but also situations where they were blameless (e.g. a kangaroo collides with the car and single vehicle accidents). “Not at fault” covers all participants who were either not at fault, or only had a small contribution to their injury.

To date around half of the participants have likely been at fault or no one was at fault (see Figure 2.6). This highlights the benefit of the Scheme to motorists who previously would have been ineligible to receive support for their injuries (workers were already covered on a no-fault basis before the extension of the LTCSS to work injuries).

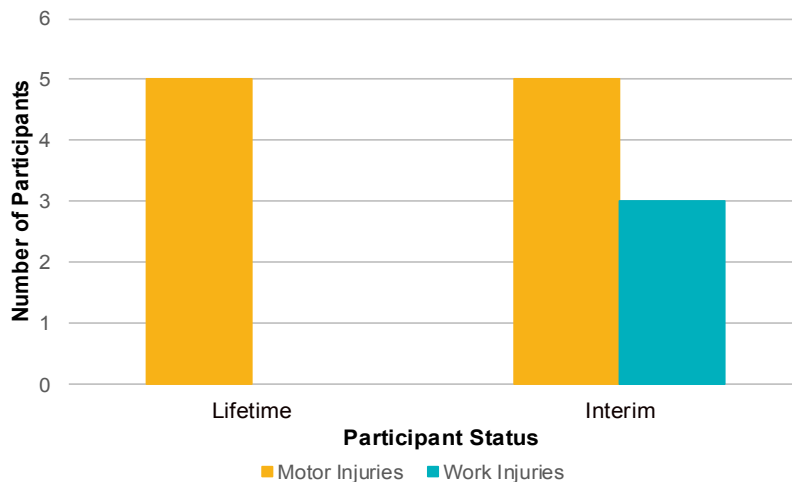
**Figure 2.6 – Participant split by at fault status**



For the ACT LTCS Scheme, successful applicants are initially accepted into the Scheme as ‘interim’ participants. The interim period lasts two years, or until a participant’s 5<sup>th</sup> birthday if they were less than three years old at the time of acceptance into the Scheme. At the end of the interim period participants are assessed on whether their injuries qualify them for acceptance as ‘lifetime’ participants.

Figure 2.7 shows the split of the participants by Scheme status.

**Figure 2.7 – Participant split by status**



All participants to 30 June 2019 who have been assessed for lifetime participation have been accepted.

## 2.2 Comparison to other schemes

*Objective 7A Part 1(b): compare the ACT participant profile including by injury type and severity, to the profile of participants in other schemes*

We have made a number of comparisons of the ACT's LTCSS's experience to the most recently available experience of the equivalent schemes in NSW and Queensland.

The scheme in NSW is the Lifetime Care and Support Scheme (NSW LTCSS), which commenced on 1 October 2007. The NSW LTCSS covers motor injuries only; cover for catastrophic work injuries are covered within the NSW Workers' Compensation Scheme. The NSW LTCSS also coordinates and administers treatment and care benefits to catastrophically injured workers in NSW, but is not liable for their costs. The NSW LTCSS has 1,345 motor participants as at 30 June 2018.

In Queensland the National Insurance Injury Scheme Queensland (NIISQ) covers catastrophic injuries from motor accidents. The NIISQ manages catastrophically injured workers on behalf of workers' compensation insurers, but is not liable for their costs. The NIISQ commenced on 1 July 2016 and had 168 motor injury participants at 31 March 2019 (active cases only, excluding lifetime exited). Participants of the Queensland Scheme with less than 50% fault can choose to opt out of the NIISQ.

Comparison between the ACT LTCSS and other schemes needs to be treated with some care, as each jurisdiction is different and some schemes have different criteria for eligibility. The NSW Scheme is the most mature, having been in operation for over ten years and hence their experience has stabilised more than either Queensland or the ACT. In contrast, the NIISQ has been in operation only three years (two less than the ACT LTCSS). Although the NIISQ has significantly more claims than the ACT LTCSS, both schemes are in their infancy and will take a significant time to stabilise. Although comparable on scheme maturity, the differences in the Queensland motoring environment to the ACT (less urbanisation, different fleet ages, etc.) make comparison more difficult.

The reports the interstate data have been sourced from are listed in Appendix B.

Table 2.2 shows the split of payments made in the ACT LTCSS, compared with the equivalent schemes in NSW and Queensland.

**Table 2.2 – Motor injury split of payments**

Split of Payments*	Motor Injuries		
	ACT *	NSW **	QLD **
Attendant Care	4%	49%	24%
Hospital	27%	12%	7%
Medical	9%	5%	2%
Home modifications	1%	4%	20%
Rehabilitation	41%	16%	19%
Equipment	8%	8%	25%
Case Management	10%	-	3%
Other	-	6%	0%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

\* ACT data is for the Scheme to 30 June 2019

\*\* Payments from 1 July 2016 to 30 June 2018

Table 2.2 indicates that for motor accidents the ACT has paid a much lower level of costs on attendant care than the other jurisdictions, while paying more in hospital, medical and rehabilitation costs.

As schemes mature, we expect the proportion of payments spent on attendant care to increase significantly, as this is the predominant type of care the schemes will provide. In the early years of a scheme, and a participant's participation, we expect much higher proportions of payments being made to hospital and rehabilitation costs (as is the case of the ACT).

Other reasons for differences between states include:

- The classification of payment types into groups may differ between states;
- The ACT's motor risks are different due to the nature of the territory. For example, it has a higher level of urbanisation and more modern fleets. This may impact the types of catastrophic claims occurring; and
- The Queensland legislation allows motor injury participants who were not-at-fault (or whose contributory element was less than 50%) to pursue common law, subsequent to joining the Scheme. These participants can choose to receive a common law lump sum for treatment and care and leave the NIISQ.

Differences may also arise due to the size and maturity of the schemes. The NSW Scheme is a much more mature scheme, having operated for more than 10 years and having in excess of 1,300 participants. The NIISQ, whilst only three years in existence, still has over 160 participants. In contrast, the ACT LTCSS has only 13 participants.

The extremely small size of the ACT Scheme means that there will be considerable variation year on year in the payment types, depending on the nature and severity of injuries. This is demonstrated in Table 2.3, with highly variable proportions of payments in the majority of expense categories from year to year. The volatility in the ACT Scheme having only 13 participants to date, and 10 motor participants, is clearly observable.

**Table 2.3 – ACT split of payments by payment type by year (motor injuries)<sup>5</sup>**

Payments by Year	2014/15	2015/16	2016/17	2017/18	2018/19	Average
Attendant Care	1%	3%	7%	5%	4%	4%
Hospital	71%	1%	11%	12%	42%	27%
Medical	0%	20%	15%	6%	3%	9%
Home modifications	1%	0%	0%	-	4%	1%
Rehabilitation	18%	50%	49%	52%	34%	41%
Equipment	0%	13%	9%	14%	3%	8%
Case Management	8%	12%	9%	11%	9%	10%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Table 2.4 shows the proportion of participants by injury type as at 30 June 2019 in the ACT LTCSS, compared with NSW and Queensland. The ratio of traumatic brain injury (TBI) to spinal injuries seen to date is similar to the other states. The "Other" injury type includes injuries such as burns and amputations. There had been no such injuries in the ACT to 30 June 2019.

<sup>5</sup> The average column shows the average by payment type for the total payments between 2014/15 and 2018/19, rather than the average of the individual years.

**Table 2.4 – Split of injury type**

Injury Type	Motor Injuries		
	ACT	NSW *	QLD **
TBI	70%	76%	77%
Spinal	30%	22%	19%
Other	-	3%	4%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

\* NSW LTCSS data is to 30 June 2018

\*\* NIISQ data is to 31 March 2019

Table 2.5 shows the split of participants by their role in the accident as at 30 June 2019 in the ACT LTCSS compared with the NIISQ to 30 June 2018. To date the experience has not been particularly similar; however, given the extremely small number of ACT participants (13) it is not possible to draw any substantive conclusions. In the longer term the trends in the two schemes may become discernible.

**Table 2.5 – Role in accident**

Role In Accident	Motor Injuries	
	ACT	QLD *
Driver	10%	43%
Motorcycle rider	40%	22%
Pedestrian	30%	14%
Passenger	10%	12%
Bicycle rider	10%	3%
Other	-	6%
<b>Total</b>	<b>100%</b>	<b>100%</b>

\* NIISQ data is to 31 March 2019

## 2.3 Treatment and care payments made for current participants

*Objective 7A Part 1(c): provide an analysis of the treatment and care payments made by the scheme by service type*

*Objective 7A Part 1(d): provide the estimated average cost of claims by participant injury type, disaggregated by participant benefit payment category*

Table 2.6 shows the amounts paid to date, estimated outstanding costs, and estimated total incurred costs, split by payment types for all participants in the ACT LTCSS at 30 June 2019. The outstanding costs reflect actuarial estimates of participants' expected future costs, based on injury benchmarks and participants' age, injury type and injury severity. The total incurred is the sum of the amount paid to date, and the estimated outstanding costs. All figures are expressed in 2019 \$, ignoring future inflation and discounting for investment on reserves.

It can be seen that the category split of payments to date is significantly different to the expected split of the estimated total incurred costs. This is largely due to the 'start up' nature of the Scheme: in the early years it is expected that the bulk of costs would be spent on hospital, rehabilitation and equipment. Over the longer term, as participants' injuries stabilise, we would expect the payment split to be more reflective of the long term benchmarks (as presented by outstanding costs).

**Table 2.6 – Motor and work injury estimated stream total costs by payment type (\$'000)<sup>6</sup>**

Scheme	Paid to Date		Outstanding Costs		Total Incurred	
	Jun 19\$	% of total	Jun19\$	% of total	At Jun 19	% of total
Attendant Care	\$448	13%	\$43,032	76%	\$43,480	73%
Hospital	\$1,053	30%	\$3,363	6%	\$4,416	7%
Medical	\$235	7%	\$1,764	3%	\$1,999	3%
Home modifications	\$88	3%	\$1,160	2%	\$1,248	2%
Rehabilitation	\$1,086	31%	\$2,544	5%	\$3,630	6%
Equipment	\$276	8%	\$2,610	5%	\$2,886	5%
Case Management	\$308	9%	\$1,902	3%	\$2,210	4%
<b>Total</b>	<b>\$3,495</b>	<b>100%</b>	<b>\$56,375</b>	<b>100%</b>	<b>\$59,869</b>	<b>100%</b>

The estimated outstanding costs (around \$56m in total) are significantly larger than the payments to date (around \$3.5m in total). This reflects that the participants are expected to remain on benefits for many decades to come, whereas they have been a member of the Scheme on average for around two years to date.

The estimated outstanding cost amount in the above table differs from the inflated and discounted valuation provision at 30 June 2019 of \$47m. The figures in Table 2.6 are in June 2019 dollars (i.e. they do not take into account any future inflation in costs of treatment, nor do they take into account the discount expected investment returns of the Scheme when holding a provision). The expected investment return is at a higher rate than the expected rate of future inflation, thus the unadjusted figures in Table 2.6 are higher than the June 2019 valuation's outstanding claims figures.

Table 2.7 shows the payments to date split by treatment, rehabilitation, and care categories payable under the Scheme for participants with brain injuries and spinal injuries. Although participants with brain injuries represent 70% of the Scheme, they represent only around half of payments to date. This reflects the higher costs for participants with spinal injuries. Spinal injuries have higher costs than brain injuries generally, but especially in the early years post injury when there is high hospital, home modification and equipment costs.

**Table 2.7 – Motor and work injury stream total payments to date by injury type and payment type (\$'000)**

Payment Type	TBI Injuries		Spinal Injuries		All Injuries	
	\$	% of Total Paid	\$	% of Total Paid	\$	% of Total Paid
Attendant Care	\$97	3%	\$352	10%	\$448	13%
Hospital	\$331	9%	\$722	21%	\$1,053	30%
Medical	\$163	5%	\$72	2%	\$235	7%
Home modifications	\$3	0%	\$85	2%	\$88	3%
Rehabilitation	\$906	26%	\$180	5%	\$1,086	31%
Equipment	\$24	1%	\$252	7%	\$276	8%
Case Management	\$195	6%	\$113	3%	\$308	9%
<b>Total</b>	<b>\$1,719</b>	<b>49%</b>	<b>\$1,776</b>	<b>51%</b>	<b>\$3,495</b>	<b>100%</b>

<sup>6</sup> June 2019\$ means amounts are valued as if the payments occurred on 30 June 2019. i.e. payments are re-expressed to remove future inflation and allow for past inflation. No discounting is applied.



Table 2.8 shows the average estimated total cost per participant (CPP) in June 2019\$, split by payment type. The averages reflect the age and injury severity of the Scheme's participants to date.

**Table 2.8 – Motor and work injury stream average estimated total cost per participant by payment type (June 2019 \$'000)<sup>7</sup>**

Payment Type	TBI Injuries CPP	% of TBI Injury Costs	Spinal Injuries CPP	% of Spinal Injuries	All Injuries CPP	% of Total Costs
Attendant Care	\$3,556	78%	\$2,868	60%	\$3,345	73%
Hospital	\$312	7%	\$403	8%	\$340	7%
Medical	\$112	2%	\$249	5%	\$154	3%
Home modifications	\$13	0%	\$283	6%	\$96	2%
Rehabilitation	\$298	7%	\$237	5%	\$279	6%
Equipment	\$107	2%	\$480	10%	\$222	5%
Case Management	\$136	3%	\$246	5%	\$170	4%
<b>Total</b>	<b>\$4,534</b>	<b>100%</b>	<b>\$4,766</b>	<b>100%</b>	<b>\$4,605</b>	<b>100%</b>

Across all participants the current expected cost per participant is \$4.6 million in June 2019\$. Spinal injuries are slightly more expensive (\$4.8 million) while TBI injuries are slightly cheaper (\$4.5 million).

Average costs per participant for brain injuries are dominated by the attendant care costs that are expected to be paid out every year for many decades to come. For spinal injuries the major driver of cost is also attendant care. However, other costs such as equipment and home modifications mean attendant care costs represent a lower proportion of the total than for brain injuries (60% versus 78%).

## 2.4 Conclusions

The actual make up of Scheme participants to date has not been exactly in line with expectations. Given the extremely small size of the scheme, significant volatility might be expected. In general, the average age of motor injury participants has been significantly younger than expected. The proportion of brain vs spinal injuries has been roughly in line with expectations.

Comparisons to interstate schemes are, while interesting, difficult to draw any conclusions from, given the extremely small size (and limited period of operation) of the ACT scheme.

Analysis of the Scheme treatment and care payments by service type revealed that the split of payments to date is different to that expected over the long-term. Both work and injury streams showed significant volatility in the split of payments from year to year. As the Scheme matures, we would expect the split of payments to stabilise at levels that are more in line with expectations.

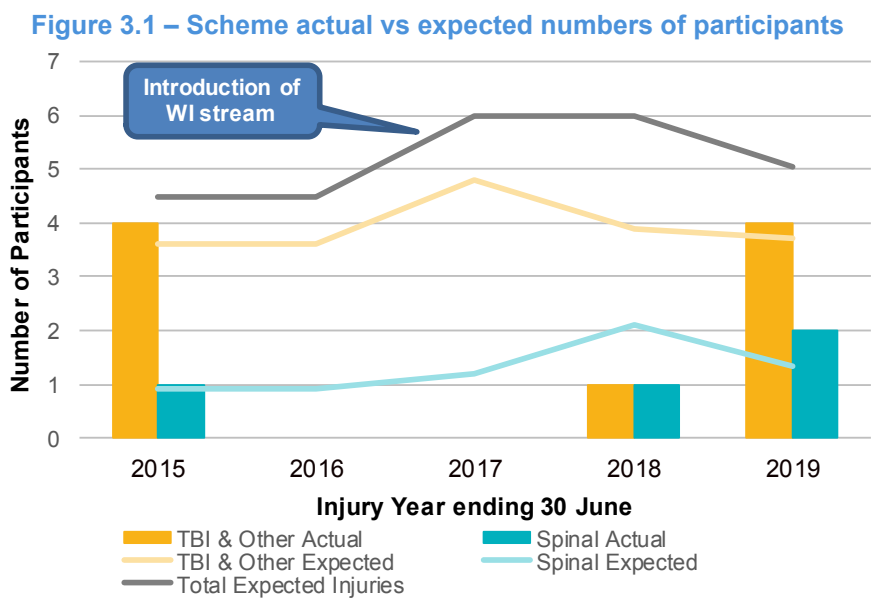
<sup>7</sup> Figures for All Injuries represent a weighted average over the two injury types

### 3 Objective 7(b)

*Objective 7B: (a) Review the drivers of the LTCS levy, including the estimated participant numbers and the average estimated cost of claims; and  
Objective 7B: (b) Review changes, and drivers for the changes, in the LTCS motor vehicle accident levy and work accident levy and benchmark against other similar schemes.*

#### 3.1 Drivers of LTCS levy

The two major drivers of cost for the LTCS levy are participant numbers and the average cost per participant. Figure 3.1 shows the number of participants accepted into the Scheme each year compared to the expected number from corresponding levy calculations.



The TBI & Other category only has a small allowance for other injury types, and so we have referred to it below as TBI injuries. All participants to 30 June 2019 have suffered brain or spinal injuries.

The increase in expected participant numbers in 2017 for both brain and spinal injuries reflects the work injuries stream starting, with expected catastrophic injuries per year increasing from 4.5 to 6.0 in total. Revised assumptions in 2018 kept the total number of expected catastrophic injuries at 6.0, but changed the expected mix of brain and spinal injuries. Expected numbers were reduced for 2018/19 reflecting that although volatile, participant numbers have been below the original expected numbers.

Across the Scheme to date, participant numbers have been lower than expected for both TBI and spinal injuries. There has been significant volatility from year to year with participants varying between 0 and 5 per annum. For a scheme expecting 4 to 6 participants a year, this level of volatility is to be expected. The total participants to date and expected are summarised in Table 3.1. Across the total Scheme there have been 13 less participants than originally anticipated over the 5-year period the Scheme has been in operation.

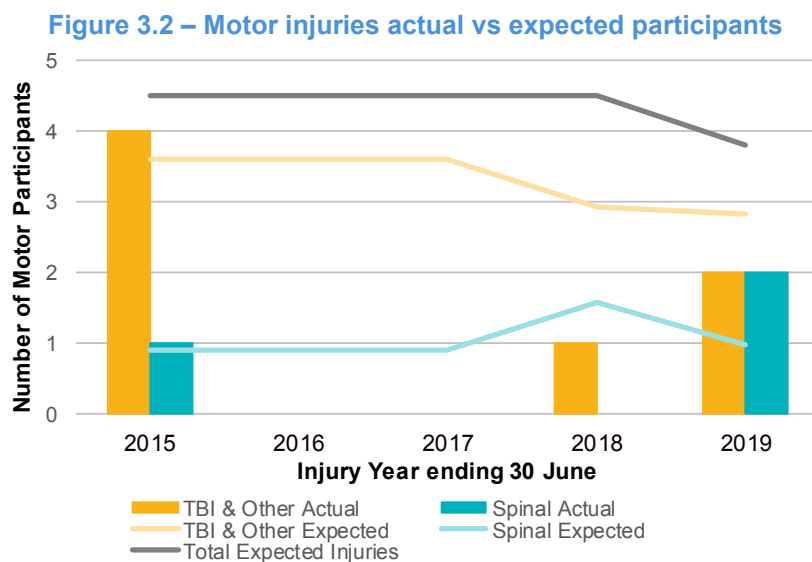
The reduction in the total expected participants in 2019/20 is mostly in relation to the motor injury stream, which reflects lower than expected numbers in most years. The incidence of catastrophic motor injuries has been extremely volatile to date, with 5 in 2014/15, 4 in 2018/19, and only 1 across the three years from 2015/16 to 2018/19. The total expected number of participants across the five years was 22 (4.5 for four years, and 3.9 for one year). There have been 10 injuries to date, so therefore, numbers are 12 less than expected.

Both brain injury and spinal injury participant numbers have been less than expected.

Figure 3.2 and Figure 3.3 show the actual and expected participants for the motor injury and work injury streams, split by injury type. For both motor and work injuries the changes in expected numbers followed the same pattern as for total claims: a change in mix of expected injury types in 2018, and a reduction in expected claim numbers in 2019. Prior to the 2018 levy calculations, the expected mix by injury type for motor and work injuries was the same. From 2018 the mix changed as no allowance was made for children to suffer work injuries.

The incidence of catastrophic motor injuries has been extremely volatile to date, with 5 in 2014/15, 4 in 2018/19, and only 1 across the three years from 2015/16 to 2018/19. The total expected number of participants across the five years was 22 (4.5 for four years, and 3.9 for one year). There have been 10 injuries to date, so therefore, numbers are 12 less than expected.

Both brain injury and spinal injury participant numbers have been less than expected.



The number of work injury participants injured each year across the financial years 2016/17, 2017/18 & 2019/20 has been 0, 1 and 2 respectively. This is closer to expectations than the motor injury stream, and is only around 1 participant less than expected (total expected was 4.25, equal to 1.5 for two years and 1.25 for 2019). The number of spinal injury participants is almost in line with expectations.

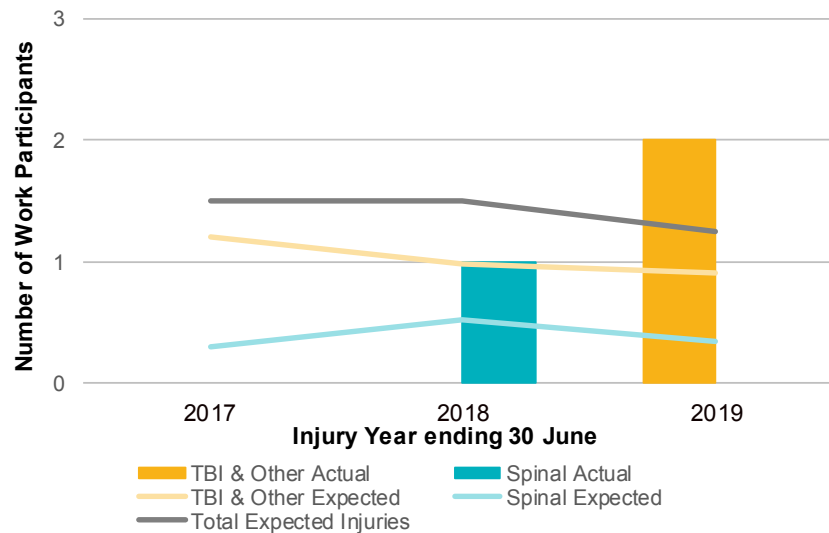
**Figure 3.3 – Work Injuries actual vs expected participants**

Table 3.1 shows the actual and expected number of participants, cost per participant (excluding claim handling expenses) and total Scheme costs. The expected costs per participant and total costs are the costs from the 2019/20 levy calculations and reflect the weighted probabilities of the possible age and severity ranges for Scheme participants. The ‘actual’ costs per participant and total costs are based on the estimated costs from the 30 June 2019 valuation, and reflect the profile of the Scheme’s participants to date (see Table 2.8). To ensure a “like with like” comparison, the figures are shown in June 2019\$, with no allowance for future inflation or discounting.

For privacy reasons we have only shown the cost per participant and total costs at a total Scheme level and not for each stream.

**Table 3.1 – Scheme actual vs expected participants and costs (June 2019 \$m)**

Scheme Total	Actual	Expected	Diff	Diff %
<b>Participants</b>				
TBI	9.00	19.63	-10.63	-54%
Spinal	4.00	6.42	-2.42	-38%
Total	13.00	26.05	-13.05	-50%
<b>Cost per Participant (\$m)</b>				
TBI **	4.53	3.10	1.44	46%
Spinal	4.77	4.78	-0.02	-0%
Total	4.61	3.51	1.09	31%
<b>Total Cost (\$m) *</b>				
TBI	40.81	60.82	-20.02	-33%
Spinal	19.06	30.71	-11.65	-38%
Total	59.87	91.54	-31.67	-35%

\* Expected costs are based on current benchmarks

\*\* Expected TBI costs include allowance for interim participants

Overall, costs to date in the Scheme have been much lower than anticipated (35% lower), driven by fewer participants than expected. The number of catastrophic injuries has been 50% less than expected. This has been partially offset by higher estimated costs per participant, which has been 31% higher than expected based on the levy calculations.

The higher than expected estimated average cost per participant has been driven by the higher than anticipated severity mix of brain injuries. The nine participants with brain injuries who have joined the Scheme have costs 46% higher than expected from the levy calculations. This higher cost reflects the actual mix in injury severity, age and injury type differing from the expected mix in the levy calculations.

The average cost per participant of spinal injuries has to date been in line with expectations.

Given the extremely small numbers to date, it is not possible to draw any conclusion from these figures on the long term average claim size.

Table 3.2 shows a comparison of actual and expected numbers and cost per participant, expressed as percentages.

**Table 3.2 – Actual vs expected**

Scheme	Actual vs. Expected	
	Number of Participants	Cost per Participant
	%	%
Motor Injury	-54%	25%
Work Injury	-29%	42%
<b>Scheme Total</b>	<b>-50%</b>	<b>31%</b>

The trends across the motor and work injury streams in Table 3.2 are in line with the experience for the total Scheme. Both show that the number of catastrophic injuries has been less than expected, but that the cost per participant is higher.

### 3.2 Comparison to other jurisdictions

Comparing the ACT's LTCSS scheme to NSW and Queensland is problematic. Section 2.2 illustrated a number of ways in which the ACT differs from the two states, and those differences will impact both the cost per participant and frequency of catastrophic injuries. Differences include:

- The ACT is more urbanised than the states of NSW and Queensland
- Motor fleet ages and mix of vehicle type are different
- Employment types, wage mix and access to care and support will vary
- As the location of the crash determines if the ACT LTCSS or NSW LTCSS is responsible, the mix of ACT drivers spending time in NSW and NSW drivers spending time in the ACT may distort the ACT's frequency compared to other jurisdictions

Table 3.3 shows the historical levies applied in the ACT, NSW and Queensland.

**Table 3.3 – Historical Motor Levy and Comparison to NSW and Queensland**

Year	Applied levy		
	ACT	NSW*	QLD **
2014/15	34.00	65.94	
2015/16	34.00	72.86	
2016/17	35.00	67.63	69.00
2017/18	35.00	80.51	85.00
2018/19	36.50	80.51	88.20
2019/20	37.00	78.81	90.50

\* NSW period is not always 1 July to 30 June

\*\* Queensland scheme began 1 July 2016

The ACT's motor LTCS Levy has increased by \$3.00 in five years, which is an increase of 1.7% across this period. This low rate of increase reflects the fact that overall costs have emerged lower than expected, with lower than expected participant numbers partially offsetting the increase in expected costs per participant

### 3.3 Conclusions

Based on the analysis of the expected cost per participant at 30 June 2019, and the Scheme holding net assets of \$18.1 million at 30 June 2019, we believe that the Scheme is fully funded.

The size and age of the Scheme means we expect that experience to date will be volatile, and may not reflect what is expected to be observed in the longer term. The participant numbers to date have been less than assumed in the levy expectations, while the estimated average cost of brain injuries has been higher than the levy expectations.

The current premiums are within a reasonable range, and are expected to fully fund future participant costs. Changes to future levy rates should reflect the experience to date, but also the uncertainty that exists and the volatility that has been observed to date.



## 4 Reliances and Limitations

This report is subject to a number of limitations, reliances and assumptions. The main ones are outlined below.

### 4.1 Reliance on Data and Other Information

We have relied on the accuracy and completeness of the data and other information (qualitative, quantitative, written and verbal) provided to us by the CMTEDD for the purpose of this report. We have not independently verified or audited the data, but we have reviewed the information for general reasonableness and consistency.

We have also relied on publicly available information in relating to the NSW LTCS and Queensland's NIISSQ.

The reader of this report is relying on the CMTEDD and not Finity for the accuracy and reliability of the data. If any of the data or other information provided is inaccurate or incomplete, our advice may need to be revised and the report amended accordingly.

#### 4.1.1 Other Uncertainty

There is considerable uncertainty in the projected outcomes of future claims costs, particularly for long tail claims; it is not possible to value or project long tail claims with certainty.

In our judgement, we have employed techniques and assumptions that are appropriate and the conclusions presented herein are reasonable given the information currently available, subject to our comments above. However, it should be recognised that future claim outcomes and costs will likely deviate, perhaps materially, from the estimates shown in this report.

### 4.2 Limitations on Use

This report has been prepared for the use of the Minister for the purpose stated in Section 1. At CMTEDD's request, we consent to the release of this report to the public, subject to the reliances and limitations noted in the report.

Third parties, whether authorised or not to receive this report, should recognise that the furnishing of this report is not a substitute for their own due diligence and should place no reliance on this report or the data contained herein which would result in the creation of any duty or liability by Finity to the third party.

While due care has been taken in preparation of the report Finity accepts no responsibility for any action which may be taken based on its contents. This report, including all appendices, should be considered as a whole. Finity staff are available to answer any questions, and the reader should seek that advice before drawing conclusions on any issue in doubt.

Finity has performed the work assigned and has prepared this report in conformity with its intended utilisation by a person technically competent in the areas addressed and for the stated purpose only. Judgements about the conclusions drawn in this report should be made only after considering the report in its entirety, as the conclusions reached by a review of a section or sections on an isolated basis may be incorrect.

## Part II Appendices

### A Terms of Reference

Review the operation of the LTCS Act over the 5 year period from the commencement of the LTCS Scheme on 1 July 2014 to 30 June 2019 for the motor vehicle accident injuries stream, and over the 3 year period from the extension of the LTCS Scheme to cover work injuries from 1 July 2016 to 30 June 2019; and report on the extent to which the quantitative and qualitative LTCS Scheme objectives have been achieved.

- *Objective 7 (a) 'To provide an indemnity insurance scheme to respond to the reasonable and necessary treatment and care needs of people who have suffered a catastrophic injury – (i) in a motor accident; or (ii) arising out of, or in the course of, their employment'.*
  1. *In terms of the quantitative element of the objective:*
    - (a) *provide an analysis and statistical profile of scheme participants, including by participant injury type;*
    - (b) *compare the ACT participant profile including by injury type and severity, to the profile of participants in other schemes;*
    - (c) *provide an analysis of the treatment and care payments made by the scheme by service type; and*
    - (d) *provide the estimated average cost of claims by participant injury type, disaggregated by participant benefit payment category.*
  2. *In terms of the qualitative element of the objective:*
    - (a) *Review whether, and to what extent, LTCS Scheme treatment and care services for participants in (a) the motor vehicle injury category and (b) the work injury category have been delivered efficiently and effectively;*
    - (b) *Review participants' perceptions of the impact of the transfer of administration and delivery of the Scheme benefits from the ACT government to the NSW Lifetime Care and Support Authority (NSW LTCSA) in September 2015;*
    - (c) *Review participants' perceptions of the improvements (including system design and administrative changes) made to the Scheme; and*
    - (d) *Review participants' perceptions as to whether changes are necessary to improve the:*
      - (i) *way services / benefits under the Scheme are assessed and delivered to them; and*
      - (ii) *effectiveness of the services provided to them through the scheme.*
- *Objective 7(b) "To ensure that the scheme is fully funded".*

*In terms of the quantitative elements of the objective:*

  - (a) *Review the drivers of the LTCS levy, including the estimated participant numbers and the average estimated cost of claims; and*
  - (b) *Review changes, and drivers for the changes, in the LTCS motor vehicle accident levy and work accident levy and benchmark against other similar schemes.*

## B Data

Information on the Queensland and NSW schemes was sourced from the following public documents:

- NSW
  - ▶ First review of the Lifetime Care and Support Scheme 24 August 2017 (<https://www.parliament.nsw.gov.au/lcdocs/inquiries/2432/Final%20Report%20-First%20review%20of%20the%20Lifetime%20Care%20and%20Support%20scheme.pdf>)
  - ▶ Insurance and Care (icare) NSW Annual Report 2017-18 (<https://www.icare.nsw.gov.au/-/media/icare/unique-media/about-us/annual-report/media-files/files/cta/icare-annual-report-2017-2018.pdf>)
  - ▶ Insurance and Care (icare) NSW Financial Statements 2017-18 (<https://www.icare.nsw.gov.au/about-us/annual-reports/>)
  - ▶ Insurance and Care (icare) NSW Annual Report 2016-17 (<https://www.icare.nsw.gov.au/about-us/annual-reports/>)
  - ▶ Historical Levy Rates (email correspondence with SIRA)
- Queensland
  - ▶ NIISQ Update Allied Health Professions' 17 April, 2019 (<https://niis.qld.gov.au/wp-content/uploads/2019/05/NIISQ-update-to-the-Directors-of-Allied-Health-17-April-EXTERNAL.pdf>)
  - ▶ WorkCover Queensland website <https://www.worksafe.qld.gov.au/laws-and-compliance/workers-compensation-laws/laws-and-legislation/workers-compensation-and-rehabilitation-national-injury-insurance-scheme-amendment-act-2016>
  - ▶ NIISQ Annual Report 2017-18 (<https://niis.qld.gov.au/wp-content/uploads/2018/09/47939-NIIAQ-Annual-Report-2017-2018-WEB.pdf>)
  - ▶ NIISQ Annual Report 2016-17 ([https://niis.qld.gov.au/wp-content/uploads/2017/10/17-099\\_NIISQ-Annual-Report-2016-17\\_WEB.pdf](https://niis.qld.gov.au/wp-content/uploads/2017/10/17-099_NIISQ-Annual-Report-2016-17_WEB.pdf))
  - ▶ NIISQ Update – Allied Health Professions' Office of Qld (<https://www.niis.qld.gov.au/wp-content/uploads/2019/05/NIISQ-update-to-the-Directors-of-Allied-Health-17-April-EXTERNAL.pdf>)
  - ▶ Historical information on levy rates from NIISQ website, and MAIC annual reports
    - ▶ <https://niis.qld.gov.au/about-the-scheme/about-the-levy/>
    - ▶ <https://maic.qld.gov.au/wp-content/uploads/2018/06/2018-19-MAI-Levies-and-administration-fee.pdf>
    - ▶ <https://maic.qld.gov.au/publications/annual-report-2017-18/>
    - ▶ <https://maic.qld.gov.au/publications/annual-report-2016-17/17/>

We were provided the following data by the ACT CMTEDD on the ACT Scheme.

- Information on accepted and potential ACT LTCSS participants (e.g. date of birth, gender, injury type and severity, date of incident, role in accident, at fault status)
- Payment information as at July 2019 by benefit type
- Total payments for the year ending 30 June 2019 for the motor and work injury streams
- Chief Minister, Treasury and Economic Development Directorate Annual Report 2018-19