

RECEIPT OF CENTRELINK PAYMENTS AFTER LONG-DURATION WORKERS' COMPENSATION CLAIMS

THE TRANSITIONS STUDY
REPORT 1



Healthy Working Lives

AUTHORS

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EXECUTIVE SUMMARY

What happens to workers with long duration workers' compensation claims when their workers' compensation benefits stop?

This is the central research question in the Transitions Study, and is partially answered in this report. We describe use of Centrelink benefits (social welfare payments funded by the Australian Government) before and after cessation of workers' compensation income support payments (administered by the New South Wales state government) in two groups of workers with long-duration claims, in comparison with a group of community controls.

The first group of 2,761 people was affected by the legislative amendments to section 39 of the Workers' Compensation Act 1987 (NSW), which set a 260-week (5 year) limit on income support payments for injured workers unless they were assessed as having more than 20% permanent impairment, or an exempt category of worker (such as police officers, fire fighters, coal miners). We call this group the Section 39 group. The second group of 3,890 people had received workers' compensation income support payments for at least two years, but their claims stopped independently of the section 39 amendments. We call this group the Injured Control Group. The final group of 10,114 people are community dwelling people matched on age and gender to the Section 39 group. We call this group the Community Control Group.

To answer our study question, we obtained data from Australia's social welfare system, known as Centrelink, from the Commonwealth Government and linked this to data from the New South Wales (NSW) workers' compensation system.

Our findings show that:

- There was a significant transition to Centrelink payments after workers' compensation, and this effect was largest for the Section 39 group.
- 60% of the Section 39 group received at least one regular income support payment from Centrelink at some time in the year after their workers' compensation benefits stopped. Only 7% of this group received a Centrelink payment in the year before their workers' compensation benefits stopped.
- 42% of the Injured Control group received a Centrelink payment in the year

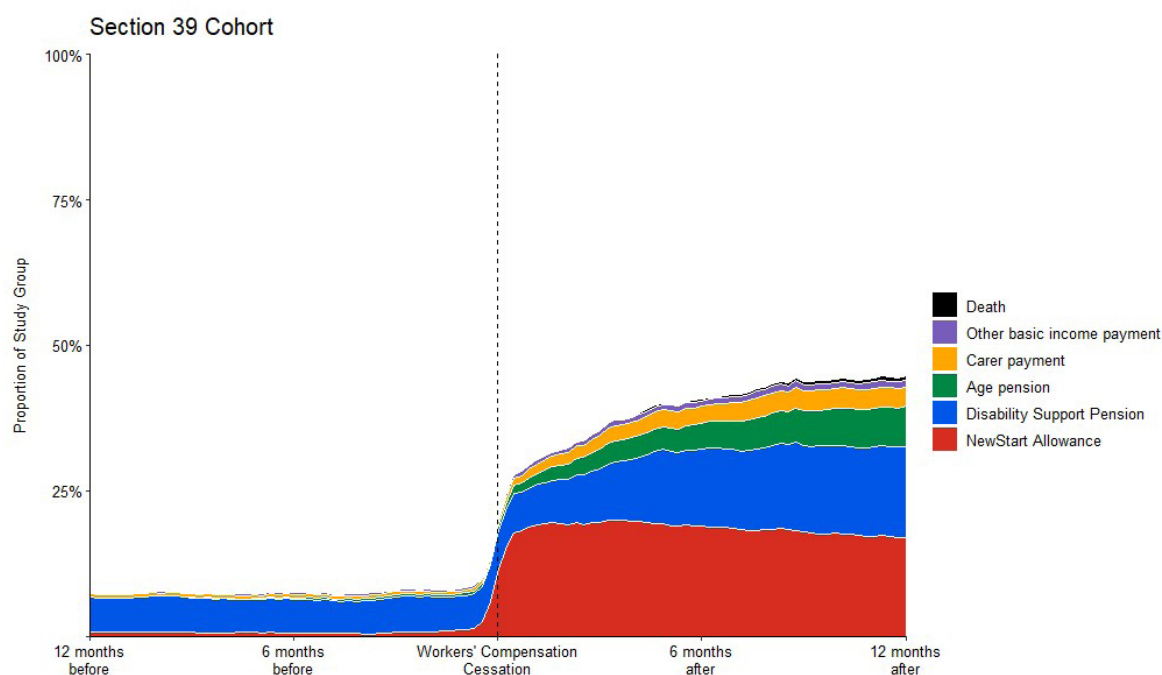


Figure. Fortnightly payments received from Centrelink for injured workers from the Section 39 cohort, during the 12-month period before, and after, workers' compensation stopped.

The most common Centrelink payments in the Section 39 group after cessation of workers' compensation were the Newstart allowance which was received by 41% of everyone in the group, and the Disability Support Pension (DSP) received by 19%. The Age Pension was received by 8%. In the Injured Control group, the Newstart allowance was received by 16%, the DSP by 8% and the Aged Pension by 13%.

Statistical analysis compared rates of Centrelink payments receipt before and after workers' compensation, adjusting for differences between groups and for a range of sociodemographic characteristics. This analysis showed that:

- Transition to Centrelink payments was 25 times more likely in the Section 39 group than the Community Control group and 5 times more likely than in the Injured Control group.
- Transition to Centrelink payments were 5 times more likely in the Injured Control group than the Community Control group.

We also examined the timing of transition to Centrelink payments, and observed that for the Section 39 group there was a rapid transition to Newstart, and a more gradual transition to the DSP payment. There was also a gradual transition to the Aged Pension among older members of the Section 39 group. This pattern was also reflected in the Injured Control Group, with a higher rate of transition to the Aged Pension.

Finally, we identified statistically significant predictors of receiving Centrelink payments among the Section 39 groups as being single (compared to partnered), not owning one's own home (compared to owning a home), living in more disadvantaged areas (compared to advantaged areas) and having longer duration workers' compensation claims (compared to shorter duration claims).

Our findings demonstrate a high rate of transition to Centrelink payments once workers' compensation benefits end, among people with long duration workers' compensation claims. The rate of transition

was greater in a group affected by the NSW Section 39 legislative amendments, but was also higher than community level use among a second group with long duration claims.

This is the first Australian study, to our knowledge, to demonstrate transitions between state and commonwealth systems of income support. It seems clear that the Section 39 legislative amendments triggered the movement of the majority of affected people with very long term claims (5+ years) from the NSW workers' compensation system onto the Australian social welfare system operated by Centrelink. Importantly we also observe this cross-system transition among other workers not impacted by the Section 39 policy change, suggestive of an underlying high rate of transition between systems for those with significant ongoing work disability.

Transitions between systems of income support has multiple implications for injured workers. These include implications for their financial security, the healthcare and treatment available to them, exposure to new and potentially burdensome administrative processes, and changes to obligations with respect to job seeking or training. These challenges, which are associated with moving from workers' compensation to Centrelink, present new risks to the health and future employment prospects of these workers with long-durations of work disability. Design and implementation of system policy changes, such as the NSW workers' compensation Section 39 legislative amendments, should take these potential impacts into account.

Among groups of workers with long duration workers' compensation claims, a number of sociodemographic and claim factors predict who is more likely to receive Centrelink payments when workers' compensation ends. These findings may enable both state and Commonwealth systems to identify people more likely to move onto Centrelink, and provide supports to ease the transition and mitigate any negative impacts.

This is one of few studies to examine post-claim outcomes of Australians with accepted workers' compensation claims. This report focuses on transition to income support. Future reports from the Transitions study will examine hospitalisation and health service use in the Section 39 group. There is a clear need for further studies on the many thousands of Australians who exit workers' compensation systems every year without returning to work: at present this is a substantial knowledge gap. Determining the health, financial, employment and social outcomes of those workers is crucial to assess the effectiveness of workers' compensation schemes, and the potential long-term impacts of being injured at work and claiming workers' compensation.

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BACKGROUND

The global burden of work-related injury and illness is substantial. In September 2021 the World Health Organisation (WHO) and the International Labour Organisation (ILO) released a joint report, estimating that occupational risk factors accounted for 1.88 million deaths and 89.72 million disability adjusted life years in 2016¹. The direct and indirect economic costs were projected at \$2.8 trillion USD in 2012, or an average of 4% of annual global GDP². The majority of injured workers will return to work within days or weeks, however a small proportion will remain off work for many months or years.

In Australia, the number of injured workers making workers' compensation claims exceeding 5 days of time off work (sometimes called 'serious claims') has declined since the turn of the century³. At the same time, the amount of time injured Australian workers with serious claims spend off work has grown from a median of 4.2 weeks in 2000-01 to 6.2 weeks in 2017-18 (Figure 1).

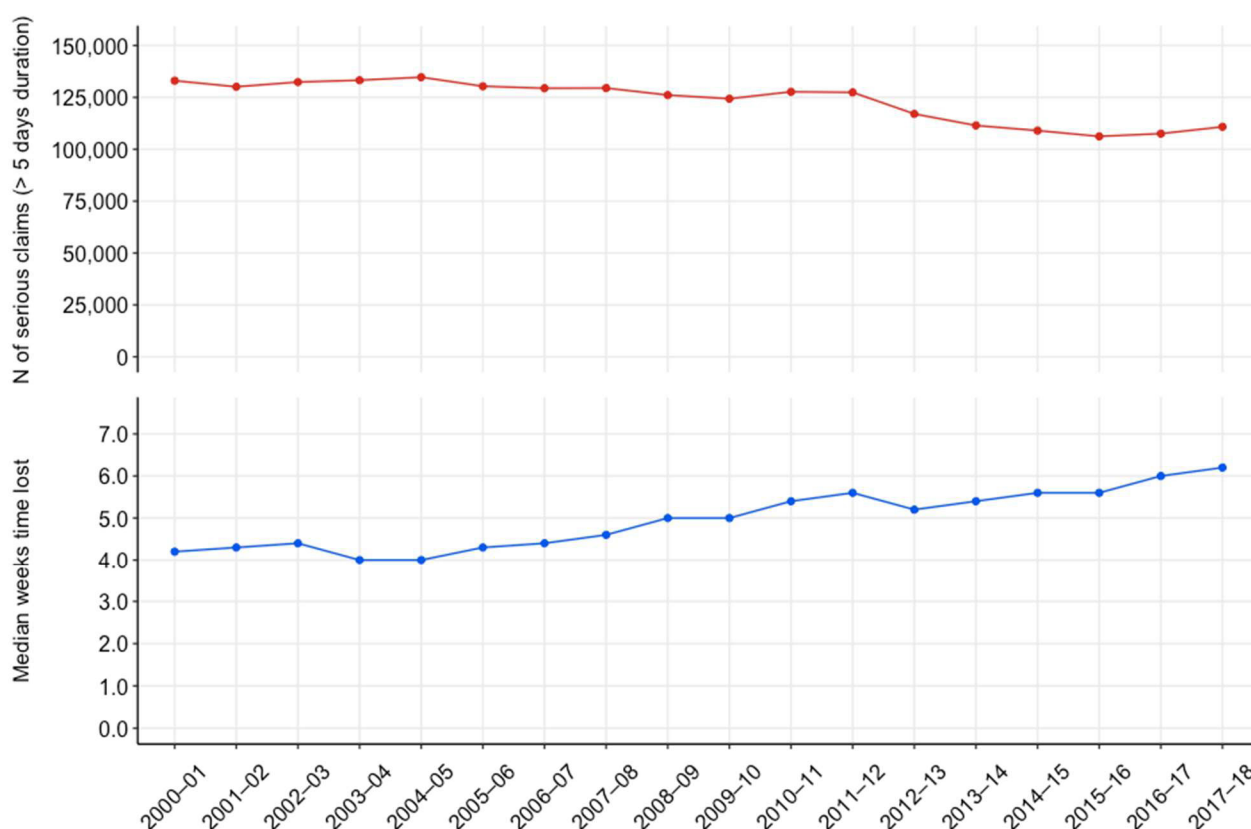


Figure 1. Number of serious claims (> 5 days duration) and median weeks' time lost, 2000- 01 to 2017-18

Workers with long periods of time off work account for a small proportion of all injured workers making workers' compensation claims. For example, using data from the National Dataset for Compensation-based Statistics, we estimated that 12% of workers' compensation claims had work absence of at least six months and 4% were absent for more than two years⁴. Despite being a relatively small proportion of all claims, these claims accounted for 76% and 47% respectively of total time loss weeks compensated.

There is also an age effect, with older workers having a higher proportion of long duration claims (Figure 2).

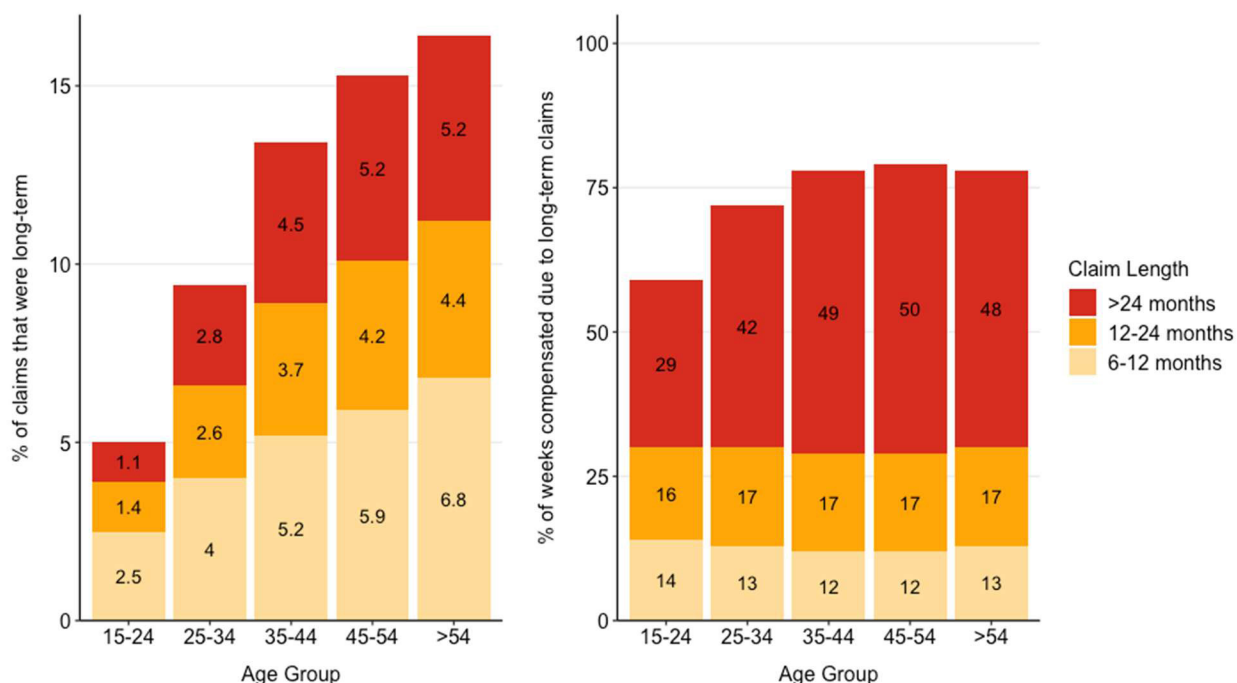


Figure 2. Percentage of claims that were long-term and the proportion of weeks compensated due to long-term claims

Long duration claims represent a substantial and disproportionately high cost to the workers' compensation system and to broader society. Extended periods of work disability are also known to have numerous negative health, social and economic consequences, and it is well-documented that it is considerably more difficult to return to work following prolonged absence⁵⁻⁷.

Australian workers' compensation schemes provide injured workers with financial support and funded healthcare while they are unable to work. These benefits are often time-capped, meaning that access to income support payments, treatment and rehabilitation cease after defined periods of time. For example, the states of South Australia, Victoria, Queensland and New South Wales (NSW) cap benefit periods to a maximum of 104 to 130 weeks for the majority of workers.

So then, what happens to those workers who have not returned to work, when their workers' compensation benefits cease?

This is the question at the core of the Transitions Study. Specifically, the study seeks to examine the health and welfare outcomes of a group of workers with long-duration compensation claims whose income benefits ceased following a 2012 reform to the NSW workers' compensation scheme. We call this group the Section 39 group.

This report describes receipt of the social welfare (Centrelink) payments in the Section 39 group in the year before and the year after workers' compensation benefit ceased, compared to another group of workers with long duration claims, and a community control group matched by age, sex and residential area.

NEW SOUTH WALES WORKERS' COMPENSATION REFORM

In 2012, the New South Wales government introduced the Workers Compensation Legislation Amendment Act 2012⁸, a major reform to their compensation system as a response to its declining financial position, which included a projected unfunded liability of \$4.1 billion and an estimated 28% increase in employer premiums⁹. Major reform features included restricting claim eligibility and limiting maximum duration of income support benefits. Under Section 39 of the Act, from December 2012 all income support benefits were capped at 260 weeks maximum duration, with exemptions made for those workers with Whole Person Impairment assessed as being greater than 20%, and for people employed as firefighters, paramedics, police officers or coal miners. For claims made prior to 1 October 2012 the 260 week count commenced on 1 January 2013. For claims made on or after 1 October 2012 the 260 week count commenced on the workers first day of incapacity. The count of 260 weeks can comprise of a single continuous period or an accumulation of non-consecutive weeks (spanning more than 260 weeks when including periods of non-payment). In practice income support benefits for affected workers began ending under Section 39 from September 2017, with the largest number ceasing in December 2017.

In late 2017 it was estimated that approximately four thousand people with very long duration workers' compensation claims exceeding five years would have their income support benefits ceased¹⁰. These people remain eligible to receive funded healthcare under the workers' compensation scheme for a further 2 years if their whole person impairment was rated at 0-10%, or up to 5 years for those with whole person impairment of 11-20%, and may also be eligible to access assistive technology, aids and equipment, home and vehicle modifications for life. However, their income support payments from the NSW workers' compensation scheme stopped.

Box 1. Summary of amendments to Section 39 of the Workers Compensation Act.

Workers Compensation Act 1987 - Section 39
39. Cessation of weekly payments after 5 years
<p>(1) Despite any other provision of this Division, a worker has no entitlement to weekly payments of compensation under this Division in respect of an injury after an aggregate period of 260 weeks (whether or not consecutive) in respect of which a weekly payment has been paid or is payable to the worker in respect of the injury.</p> <p>(2) This section does not apply to an injured worker whose injury results in permanent impairment if the degree of permanent impairment resulting from the injury is more than 20%.</p> <p>Note: For workers with more than 20% permanent impairment, entitlement to compensation may continue after 260 weeks but entitlement after 260 weeks is still subject to section 38.</p> <p>(3) For the purposes of this section, the degree of permanent impairment that results from an injury is to be assessed as provided by section 65 (for an assessment for the purposes of Division 4).</p>

People with existing claims before the Section 39 amendments came into effect on 1 October 2012 were entitled to receive a flat-rate transitional amount as their income support payment, for the remaining 260-week period until their workers' compensation payments ceased. The transitional amount is indexed. At 1 Oct 2021 it was \$920.90 per week whereas between 1 Oct 2017 and 30 March 2018 it was \$1,035.90 per week. The effect of moving existing recipients to the transitional amount was that most people saw an increase to their income support payments. For people whose claims came into effect after 1 October 2012, their weekly entitlements were calculated as a percentage of their pre- injury average weekly earnings.

SOCIAL WELFARE (CENTRELINK) PAYMENTS

In Australia the Commonwealth government makes available a range of payments to eligible Australian citizens and permanent residents, to provide financial assistance during periods of unemployment, for people whose work is affected by medical conditions or disability, for carers and parents, students and people who have retired from work. Payments are administered through the Commonwealth agency Centrelink. Table 1 provides an overview of the main types of payments examined in this report, and a summary of eligibility criteria.

Eligibility for these Commonwealth-funded payments differ from workers' compensation¹¹. Unlike the cause-based workers' compensation schemes, social welfare payments do not require individuals to demonstrate that their injury or illness occurred in the course of employment. However, the Centrelink payments are typically means-tested, factoring in family income and assets, or subject to age limits. Eligibility for the DSP requires applicants to demonstrate that they have a serious medical condition or conditions that are fully diagnosed, treated and stabilised, and for many applicants that they have participated in 18 months of formal job-seeking with a job-search agency or equivalent training and education¹².

Table 1. Overview of the major Centrelink basic payments examined in this report

Type of Payment	Description
Newstart allowance (NSA)	Jobseeker allowance (formerly Newstart allowance) is the main working age income support payment for people who have the capacity to work now or in the future. Eligibility includes being aged 22 to Age Pension age, unemployed or temporarily unable to work or study due to illness or injury.
Disability support pension (DSP)	Disability Support Pension is an income support payment for people who are unable to support themselves through employment due to a permanent physical, intellectual or psychiatric impairment. Eligibility includes having a permanent physical, intellectual or psychiatric impairment assessed at 20 points or more under the Impairment Tables, and be unable to work or be retrained for work of at least 15 hours per week within the next two years due to impairment.
Aged Pension (AGE)	The main income support payment for people who have reached Age Pension age, currently 66.5 years. Receipt is subject to income and assets tests.
Carer Payment (CAR)	Carer Payment is an income support payment for people who provide constant care for a person with a disability or severe medical condition. Receipt is subject to income and assets tests.

TRANSITION BETWEEN SYSTEMS OF INCOME SUPPORT

The differences in eligibility between workers' compensation and social welfare mean that some people previously receiving income support through workers' compensation may not be eligible to receive social welfare payments (e.g., if their household income or assets exceeds the thresholds in the Centrelink system). To our knowledge, the transition between long-term state-based workers' compensation benefit receipt and federal social welfare payment receipt has not been previously studied in Australia.

International evidence provides some guidance, much of it from North America where the division of state and federal responsibility for workers compensation and social welfare is similar to Australia, at least at a macro level. For example, a US study by Chibnall et al (2006) found that nineteen percent of low-back pain workers' compensation claimants were receiving or applied for Social Security Disability Insurance 3.5 years post-injury¹³. O'Leary et al (2012) showed that in New Mexico, those with a lost-time workplace injury were more likely to receive disability insurance benefits as time since injury increased¹⁴. Guo and Burton found in 2012 that changing workers' compensation rules, such as reducing the generosity of benefits, was associated with a significant increase in disability insurance applications¹⁵, with benefit generosity also a factor in duration of claiming¹⁶. A data linkage study from British Columbia, Canada, found that twenty-four percent of workers injured in 1991 received social welfare income support payments between 1990 and 1997, compared to less than 10% of a matched community cohort¹⁷. Of this group that received benefits, single males without children were most common (42.8%). Otherwise there is limited research on how work-disabled people transition between income support and healthcare systems, and no known evidence in Australia.

OBJECTIVE AND RESEARCH QUESTIONS

In this first report from the Transitions Study, we aim to quantify the transition of injured workers from the NSW workers' compensation scheme to the Commonwealth social welfare system operated by Centrelink. Specifically, we address the following research questions:

1. What are the characteristics of people affected by Section 39 of the NSW Workers Compensation Legislation Amendment Act (2012), and how do these compare to other people with long duration workers' compensation claims and a community comparison group?
2. What proportion of people affected by Section 39 of the Act receive social welfare payments in the year before and the year after cessation of workers' compensation benefits, and how does this compare to other people with long duration workers' compensation claims and a community comparison group?
3. What are the major types of social welfare payments made to people affected by Section 39 of the Act and how does this compare to other people with long duration workers' compensation claims?
4. What demographic, social, work and health characteristics are associated with receipt of social welfare benefits among people affected by Section 39 of the Act?
5. Among people who receive social welfare payments after cessation of workers' compensation benefits, what is the timing of transitions to social welfare payment?

METHOD

This is a retrospective controlled cohort study involving linkage of data across multiple state and Commonwealth datasets. We have previously published a study protocol and refer readers to this document for detail on the research methods¹⁰. In the following section we re-iterate some key parts of the methodological approach, most relevant to this report.

DATA LINKAGE

An overview of the data linkage process is provided in Figure 3. In brief, data linkage involved five organisations including the State Insurance Regulatory Authority (SIRA) of NSW, the Australian Institute of Health and Welfare (AIHW), the Centre for Health Record Linkage (CHeReL) and the Sax Institute as hosts of the Secure Unified Research Environment (SURE). These organisations executed a detailed protocol to extract and link workers' compensation, Centrelink, Medicare, Pharmaceutical Benefits, Hospital and Emergency Department datasets, while maintaining confidentiality, privacy and security of information. Data were linked probabilistically using unique person identifiers available in the study data sources. The Monash University research team executed the final linkage step of combining datasets and performing data analysis and reporting. For more detail of the linkage process please refer to the published study protocol¹⁰.

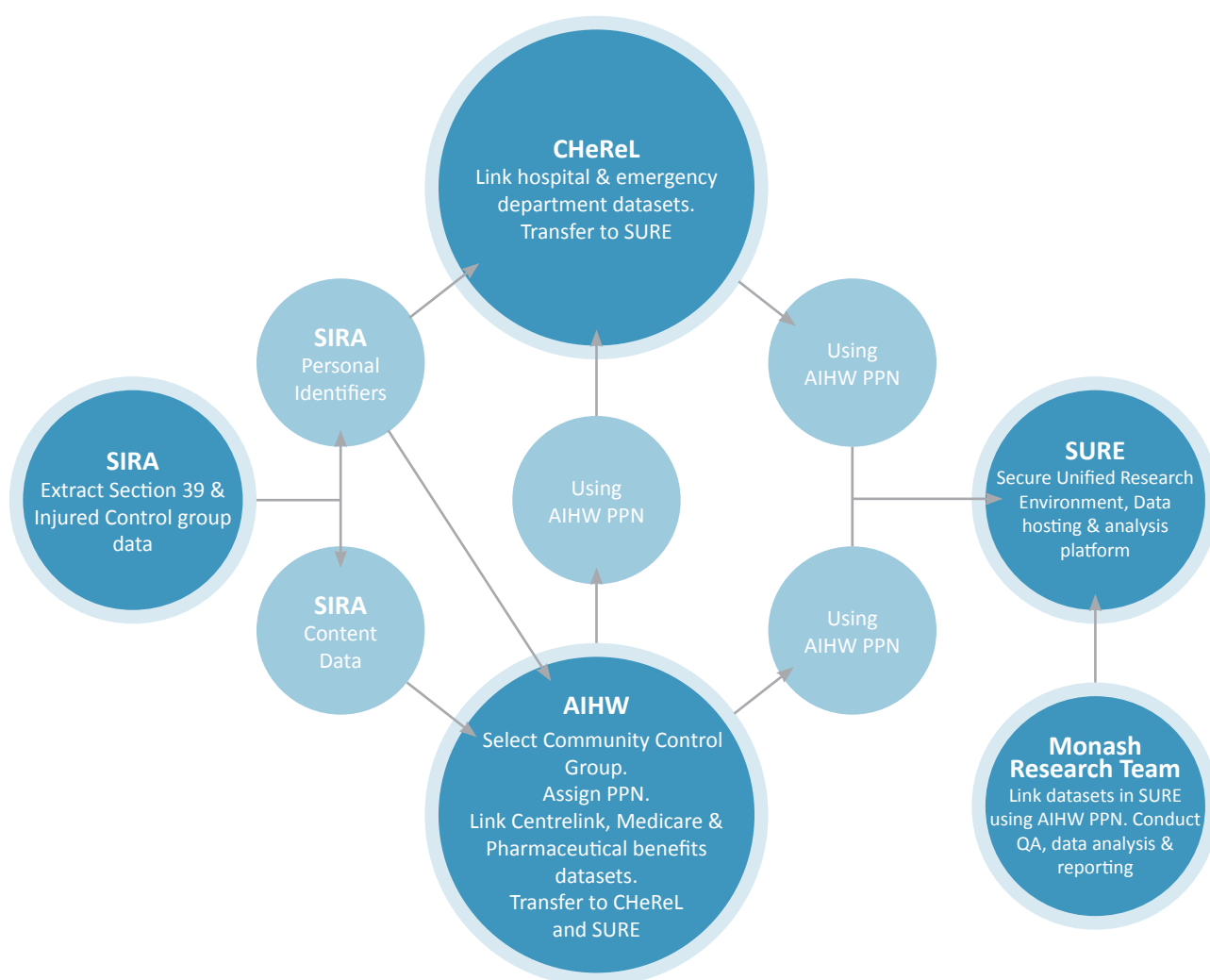


Figure 3. Overview of data linkage process

STUDY GROUPS

Three groups were defined for inclusion in the study and are summarised in Table 2.

Table 2. Description of study groups

	Section 39 Group	Injured Control Group	Community Control Group
Summary	A group of injured workers with very long duration workers' compensation claims whose income support payments ceased under Section 39 of the Act.	A group of injured workers with long duration workers' compensation claims, but whose income support payments did not cease under Section 39 of the Act.	A group of people matched to the Section 39 group on age and sex and residential location, drawn from the general population of NSW.
Inclusion Criteria	Age 18-67 years at cessation of income support payments Accepted workers' compensation claim lodged after July 1989 and closed between 26 Sept 2017 and 30 Jun 2018 260+ weeks of income support payment	Age 18-67 years at cessation of income support payments Accepted workers' compensation claim lodged after July 1989 and closed by June 2018 104+ weeks of income support payments	Age 18-67 years at 25 Dec 2017 Residents of New South Wales
Exclusion Criteria		Membership of the Section 39 group	Membership of either the Section 39 or Injured Control groups
Exposures	<ul style="list-style-type: none"> Injured at work Accepted WC claim Long duration WC income support WC income support ceased under Section 39 of the Act 	<ul style="list-style-type: none"> Injured at work Accepted WC claim Long duration WC income support 	<ul style="list-style-type: none"> None*

**it is possible that some members of the community control group had a workers' compensation claim but this is likely to be a small percentage of this group, based on an annual incidence of claiming among working age people of around 1- 3%.*

STUDY OUTCOMES

Data on social welfare payments made to all three groups were extracted from the information provided through the Department of Social Services Data Over Multiple Individual Occurrences (DOMINO) dataset from 1 July 2001 to at least 30 June 2019. We restricted analyses to DOMINO data after 1 January 2012 as preliminary analyses indicated significant changes in welfare receipt prior to this time, which also coincides with major reforms to the social welfare systems, particularly the DSP payment¹⁸. DOMINO contains modular event-based data on individual welfare recipients through their interactions with Centrelink payments. The main outcomes derived from DOMINO for the analysis presented in this study are summarised in Table 3.

Table 3. Description of social welfare outcomes

Type of Payment	Description
Any income support payment	At least one regular basic payment for any one of the following: Newstart Allowance, Youth Allowance, Disability Support Pension, Aged Pension, Carer Payment, Sickness Allowance, Parenting Payment, Special Benefit, Partner Allowance, Widow Allowance/Pension, Wife Pension, Farm Household Allowance, Austudy or Abstudy
Newstart allowance (NSA)	At least one record of payment for the Newstart Allowance
Disability support pension (DSP)	At least one record of payment for the Disability Support Pension
Aged Pension (AGE)	At least one record of payment for the Aged Pension
Carer Payment (CAR)	At least one record of payment for the Carer payment

For each group, we calculated these outcomes for the 12 months before and the 12 months after an index date. For the Section 39 and the Injured Control groups the index date was the end date of their workers' compensation income support payments (i.e. cessation date). Note that in the injured control group this date could occur at any time between 1 January 2013 and 30 June 2018, whereas for the Section 39 group this date ranged between 26 September 2017 and 30 June 2018. For the Community Control group we defined a corresponding index date as 25 December 2017, which is the median date on which workers compensation payments ceased for the Section 39 group. Thus, the outcomes for the community control group encompass the 12-month period before, and after, 25 December 2017.

COVARIATES

A range of other variables captured within the DOMINO and SIRA datasets were also used in analysis to describe study groups and as covariates in regression models. From the DOMINO dataset, these included marital status, children, living arrangements, country of birth, as well as an indicator and date of death. From the SIRA dataset this included details of the compensable injury and workers' compensation claim documented by the insurer including the nature and bodily location of injury, the duration of income support (also called weeks of entitlement) and whether the person had been involved in any common law action during their claim. Variables describing age and sex were collectively derived from both the SIRA and DOMINO datasets.

Some variables change over time such as age, relationships and living arrangements. These time-dependent variables are indexed to the date that workers' compensation payments stopped (or 25 December 2017 for the community control group).

DATA ANALYSIS

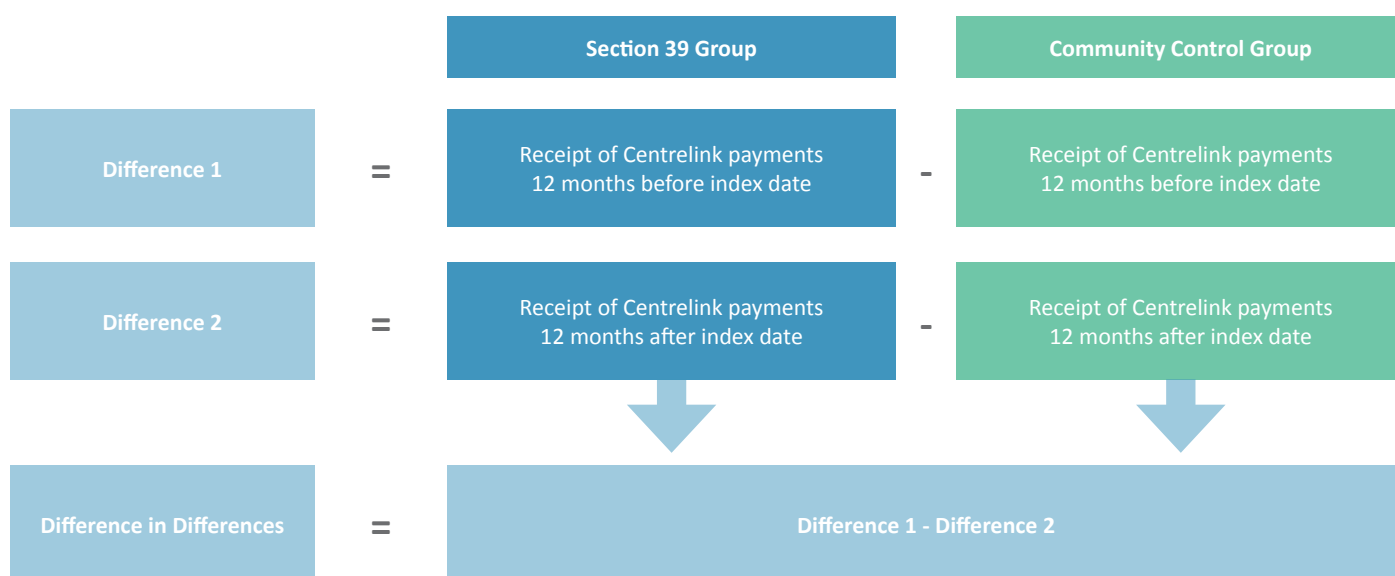
Analysis proceeded in stages. First, descriptive statistics were used to determine the number and percentage of cases linked for each of the three study groups, and the number and percentage of cases excluded from the linked cases in each group that failed to meet study eligibility criteria. Second, we calculated the number and percentage of cases in each group for the sociodemographic covariates that were available within the DOMINO data, and for the Section 39 and Injured control groups on additional injury and compensation scheme variables available within the SIRA data.

Third, for each case in all groups, we determined whether they had received a Centrelink payment in the

12 months before or 12 months after the index date. The index date was set to the date of cessation of workers' compensation payments for the Section 39 and Injured control group, and to 25th December 2017 for the Community control group. We also determined, for each case, the type of Centrelink payment/s received in the year before and year after. We then calculated the number and percentage of people in each group receiving any Centrelink payment, the DSP, the Newstart allowance, the Carer payment and the Age pension in the 12 months before and 12 months after the index date. It was important to accurately distinguish whether Centrelink payments, which are made fortnightly, were received before or after weekly workers' compensation benefits stopped. To increase our confidence that we had allocated Centrelink payments to the correct time period, we excluded Centrelink payments received in the period two weeks before and two weeks after the index date, for all groups when calculating receipt of payment 12 months before or after the index date.

In order to determine whether people in the Section 39 group are more likely to receive Centrelink payments than people in the Injured Control or Community Control Group after their workers' compensation benefits cease, we conducted what is called a difference-in-differences analysis. This is a form of regression model in which we statistically determine the differences in our outcomes between two groups in one period of time (i.e. after index date), whilst accounting for differences in the same groups during an earlier period of time (i.e. before index date). This method helps to define the transition to Centrelink payments, whilst recognising that some people are already receiving Centrelink payments before their workers' compensation payments stop (i.e. not necessarily transitioning within the study period). The approach is summarised in Figure 4 with a simplified example of comparing the Section 39 and Community Control groups.

Figure 4. Summary of difference in differences approach



The results of this approach are described as Odds Ratios (ORs). Odds Ratios significantly greater than 1 indicate that people in one group are more likely to receive Centrelink payments in the period after the index date compared to those in a comparison group. Values less than 1 indicate that people one group are less likely to receive social welfare compared to those in a comparison group. Initially we conducted univariate analysis, in which we do not seek to adjust statistical models for other factors that may influence whether people receive Centrelink payments, such as their age, gender, home ownership status and education. We then conducted adjusted analysis, in which we incorporate these sociodemographic indicators into statistical models. The outcomes of these adjusted models are called Adjusted Odds Ratios (AORs). They are interpreted in the same way as ORs, but represent a more accurate estimate

of the differences between groups, because they account for the influence of things other than group membership. In both of these first two models we compare both the Section 39 and the Injured control group to the Community control group. In a third and final adjusted model we compared the Section 39 group to the Injured Control group directly. This third model allows us to incorporate further information that is only available within the SIRA workers compensation data for these two groups, such as the nature and bodily location of their compensable injury, the duration for which they were receiving workers' compensation benefits measured in weeks of entitlement, and any indication of common law action seeking financial compensation via the courts.

Fourth, we examine which sociodemographic and claim-related factors are statistically associated with receiving Centrelink payments in the year after workers' compensation, within the Section 39 group. This analysis is restricted to the Section 39 group and the outcomes are (1) receipt of any payment in the 12 months after the index date (Yes/No); (2) receipt of the DSP in the 12 months after the index date (Y/N); and (3) receipt of the NSA in the 12 months after the index date (Y/N). We examined DSP and NSA separately as they were the most common payments received. We then determine whether particular sociodemographic and claim-related characteristics are associated with each outcome by including them as covariates in binary logistic regression models. As with the difference-in-differences model, this approach produces AORs. A value greater than 1 indicates that a person with that characteristic more commonly receives Centrelink payments in the period after the index date compared to a comparison group. Values less than 1 indicate that a person with that characteristic less commonly receives Centrelink payments compared to a comparison group. These models also account for the small number of people in receipt of Centrelink payments prior to the index date by including this feature as an additional covariate in the model.

Finally, for the members of the Section 39 and Injured control groups who had received a Centrelink payment in the 12 months after their workers compensation benefits ceased, we examined the time (in days) between their final workers' compensation payment and their first Centrelink payment. For this analysis we included Centrelink payments made up to 14 days prior to the index date, and then calculated the number and percentage of people in each group receiving their first Centrelink payment in the following time increments: within 2 weeks prior to index date; and in monthly increments thereafter until 12 months after the index date.

RESULTS

DATA LINKAGE

SECTION 39 GROUP

Workers' compensation records for 3,922 people were provided by SIRA. These records were people identified by NSW insurers as potential future members of the Section 39 group during 2016-2017. Of these, a total of 3,816 (97.3%) were linked to the DOMINO dataset with 106 (2.7%) of cases unlinked.

INJURED CONTROL GROUP

Workers' compensation records for 11,770 people were provided by SIRA. AIHW linked 11,442 (97.2%) members of this group to records within the DOMINO dataset.

COMMUNITY CONTROL GROUP

The AIHW and CHeReL provided records for a community control group comprising of 10,703 people with DOMINO records.

ELIGIBILITY

Study inclusion and exclusion criteria were applied to the linked datasets for each of the three study groups. In addition, a number of additional exclusion criteria were developed for the injured control group following exploration and quality assurance conducted on the study data. These steps are summarised in Figure 5 below and the following text.

SECTION 39 GROUP

Application of the study eligibility criteria resulted in exclusion of 1055 (27.6%) of the linked cases. The reasons for exclusion included receipt of workers' compensation income support payments after 30 June 2018 (19.1%); receiving less than a total of 259 weeks of income support payments (6.7%); missing income support payment records (1.3%); cessation of workers' compensation income support before October 2017 (0.4%), age less than 23 years at cessation (< 5 cases) or older than 67 years at cessation (< 5 cases) or record indicating that the case was deceased before cessation (< 5 cases). A total of 2,761 cases were retained for use in analysis, representing 72.4% of those linked with DOMINO data.

INJURED CONTROL GROUP

Application of eligibility criteria resulted in exclusion of 1765 (15.4%) of the linked cases. The reasons for exclusion included receipt of workers' compensation income support payments after 30 June 2018 (14.8%); missing income support payment records (0.4%); record indicating that the case was deceased before cessation (0.5%); age less than 20 years at cessation (< 5 cases) or older than 67 years at cessation (< 5 cases), or less than 103 total weeks of income support payments (<10 cases).

A further 5697 (49.8%) cases were excluded following inspection of the study data. These included 1910 (16.7%) linked cases with cessation dates prior to 2002. In these cases cessation date precedes the first available outcome data, and thus it was not possible to calculate outcomes for these cases. We also excluded 3787 (33.1%) linked cases with cessation dates prior to 2012, as preliminary descriptive analysis suggested these earlier cases were much less likely to receive Centrelink payments than injured control cases with later cessation dates. We selected the 2012 cut-off as there were a series of major reforms to the Australian social welfare system from 2012 including major changes to application procedures for the DSP, and these had a clear impact on access to Centrelink payments¹⁸. We sought to reduce the impact of these prior policy changes on our study findings by focusing analysis on cases with more recent, contemporaneous cessation dates. A total of 3980 cases were retained for use in analysis, representing 35% of those linked with DOMINO data.

COMMUNITY CONTROL GROUP

A subset of 3.6% people who had deceased prior to 11 December 2017 (i.e., a fortnight prior to the median cessation date of the Transitions group) were excluded from analysis.

A further 1.9% were aged younger than 18 or older than 67 years, or had missing age or gender data and were also excluded.

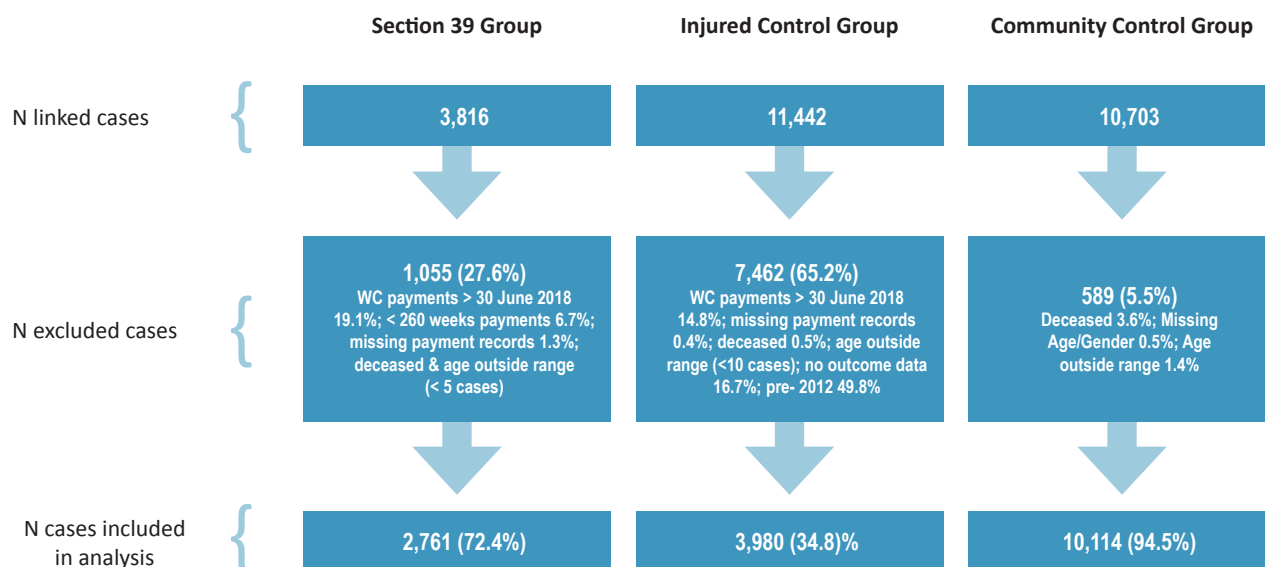


Figure 5. Summary of application of eligibility criteria

Footnotes: Workers' compensation payments for time loss without both a start period and end period date were omitted prior to eligibility screening. Ages represent the age reached during the year of the final income loss workers compensation payment. People whose date of workers' compensation cessation (from SIRA) was more than two weeks after a date of death (DOMINO) were excluded. Percentages are in reference to the respective group at the prior stage in the flowchart. Each eligibility criterion was imposed sequentially as listed.

Research Question #1

What are the characteristics of people affected by Section 39 of the NSW Workers Compensation Legislation Amendment Act (2012), and how do these compare to other people with long duration workers' compensation claims and a community comparison group?

A detailed data table summarising the sociodemographic characteristics of the study group is provided in Appendix A. We summarise these findings in the following sections. Figure 6 summarises some of the key characteristics of the study groups.

DEMOGRAPHIC CHARACTERISTICS

The Section 39 group has a significantly higher proportion of women (46%) compared to the injured control group (36%), and the group is older overall. Over 60% of the Section 39 group are aged 55 years or more, compared to 40% for the injured control group. The age and gender profile of the Section 39 group is not significantly different to the community control group due to the matching of these samples across these characteristics.

Across both the Section 39 and injured control groups, around 40% had a partner without dependent children and about one in three were single and without dependent children. Around half of each of the three groups were recorded as owning or purchasing their own home, and one in three were born outside of Australia.

At the time of cessation of workers' compensation time loss payments, the Section 39 group were more commonly residing in areas of socioeconomic disadvantage compared to the community control group, and were also more commonly living outside of the major cities.

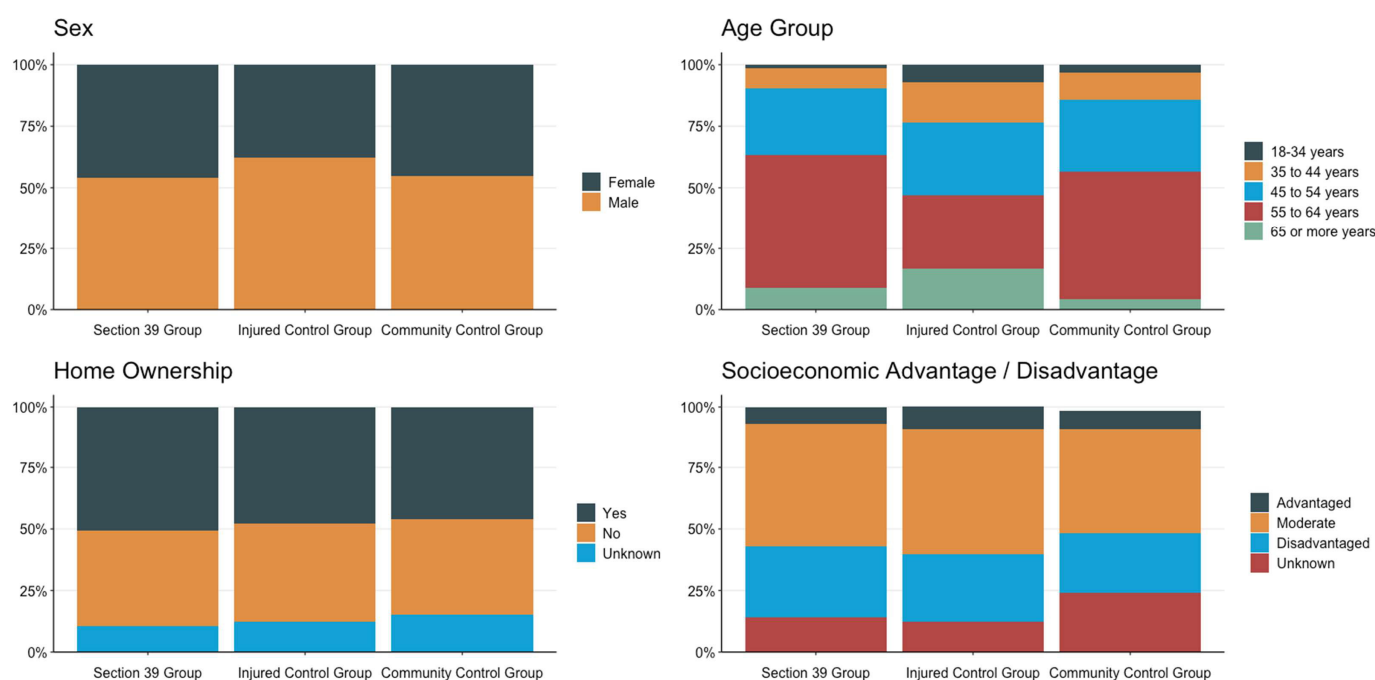


Figure 6. Select sociodemographic characteristics of study groups

NATURE AND BODILY LOCATION OF INJURY

Using the SIRA provided workers' compensation data it was possible to characterise the nature and location of injury for the Section 39 and injured control groups. The most common nature of injury was coded as injury or poisoning accounting for around 80% of both groups. Injuries described as diseases of the musculoskeletal system and connective tissue were more common in the Section 39 group, whereas mental disorders were less common compared to the injured control group.

The most common location of injury in both injured groups was the trunk (i.e. torso or central body), and this was more common for the Section 39 group (43%) compared to the injured control group (35%). Compensable injuries to the upper limbs were the second most common injury locations, followed by the lower limbs.

COMMON LAW APPLICATION FOR DAMAGES

Some workers may pursue common law actions for damages arising from a serious injury. Some outcomes of common law actions, such as payments of lump sum compensation amounts, can result in a compensation preclusion period for Centrelink income support benefits. This was relatively uncommon, with around 7% of both the Section 39 and injured control groups having records indicating some form of common law action being taken.

WEEKS OF ENTITLEMENT AND CESSATION OF PAYMENTS

The implementation of Section 39 from 26 September 2017 until 30 June 2018 mostly affected workers who had substantially more weeks of entitlement compared to the 260- week cut-off. For instance, 89% of the Section 39 group accrued more than 312 payable weeks (i.e. 6 years) of income support for time loss. In comparison, among the injured worker control group, 47% of people had accrued a total of between 104 and 259 weeks of entitlement (2-5 years).

The most common period for compensation cessation among the Section 39 group was observed between 24 December and 31 December 2017. During this single week 76% of the section 39 group received their final workers' compensation payment for time loss. The remaining people in the Section 39 group received their final payments in the weeks preceding 24 December 2017, or between January and June 2018. In comparison, among the injured control group 93% of people received their final workers' compensation payment for time loss before the end of September 2017.

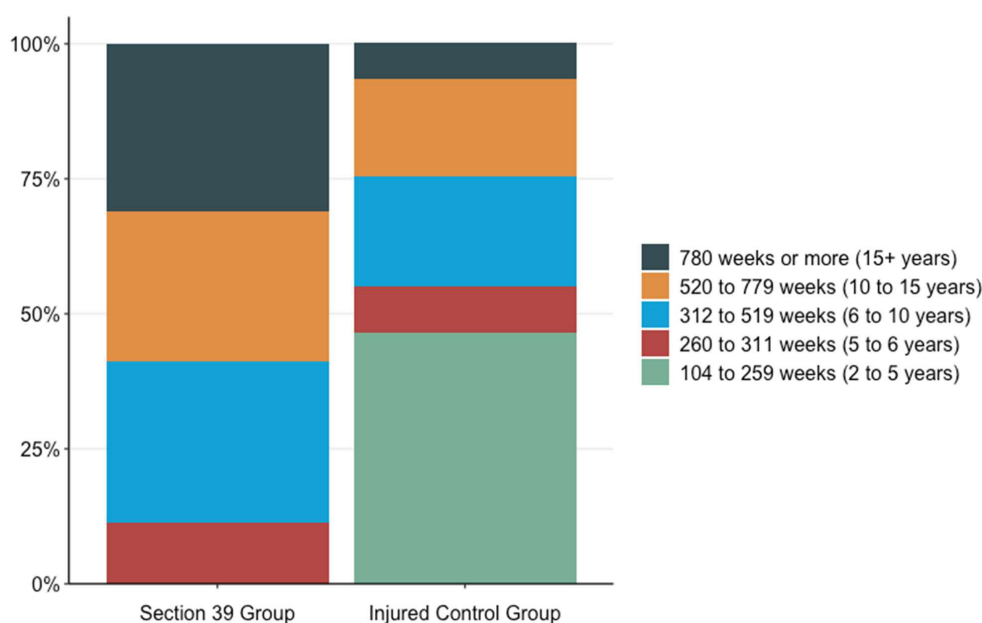


Figure 7. Duration of workers' compensation income support entitlements for the Section 39 and Injured Control groups

Research Question #2

What proportion of people affected by Section 39 of the Act receive social welfare payments in the year before and the year after cessation of workers' compensation benefits, and how does this compare to other people with long duration workers' compensation claims and a community comparison group?

Research Question #3

What are the major types of social welfare payments made to people affected by Section 39 of the Act and how does this compare to other people with long duration workers' compensation claims?

ANY CENTRELINK PAYMENT

During the 12-month period after workers' compensation payments ceased, 60% of the Section 39 group received an income support payment from Centrelink, compared with 42% of the injured control group (Figure 8). The proportion of the Section 39 and Injured control groups receiving any income support was much greater in the year after workers' compensation benefits ceased than in the year before. In comparison, 27% of the Community control group received an income support payment during the 12-month period prior to 25 Dec 2017, and 30% received a payment during the following 12 months.

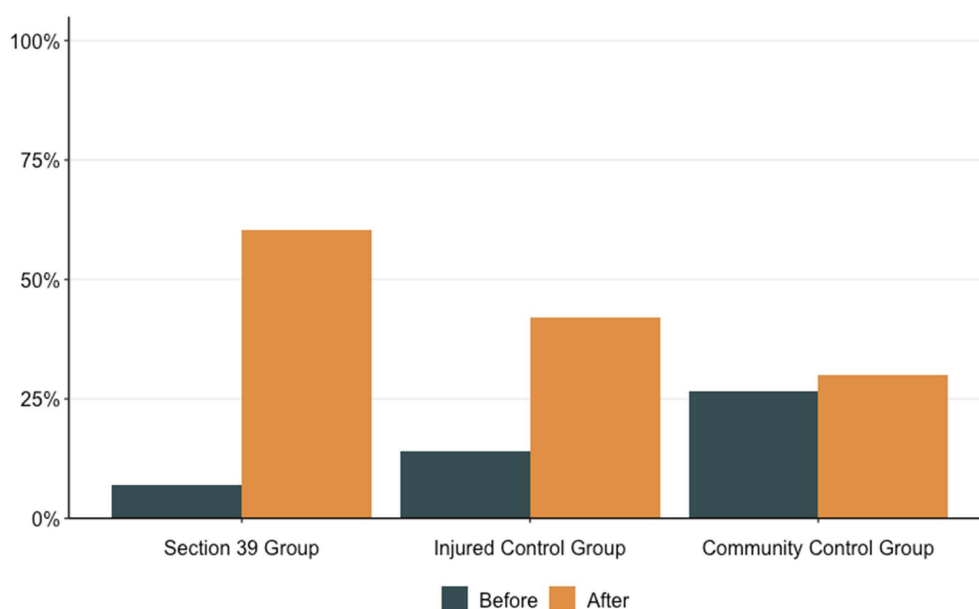


Figure 8. Percent of people in study groups receiving any Centrelink income support payment in the year before and after workers' compensation benefit cessation

Appendix C contains a data table with the results of the difference-in-difference analysis. Separate models were constructed for any Centrelink payment and the two most common individual payments in the study group, being the DSP and the NSA.

Compared to the Community control group, the Section 39 group had 25 times greater odds of receiving Centrelink payments after workers' compensation cessation, and the Injured control group 5 times greater odds. Compared to the Injured control group, the Section 39 group had 5 times greater odds of receiving any Centrelink payment in the 12 months after workers' compensation.

NEWSTART ALLOWANCE

During the year after workers' compensation cessation 41% of the Section 39 group and 13% of the Injured control group had received Newstart basic payments compared to 1% and 5%, respectively, during the year prior to workers' compensation cessation. In comparison, the rate of Newstart recipients in the Community control group was 9%.

Compared to the Community control group, the Section 39 group had 80 times higher odds of receiving the Newstart allowance after the index date, and the Injured control group had 4 times higher odds. The Section 39 group also had 21 times higher odds of receiving Newstart after the index date compared to the Injured control group.

DISABILITY SUPPORT PENSION

During the year after workers' compensation cessation, 19% of the Section 39 group and 8% of the Injured control group had received DSP basic payments compared to 5% and 4%, respectively, during the year before workers' compensation cessation. In comparison, the rate of DSP recipients in the Community control group was 11-12%.

Compared to the Community control group, the Section 39 group had 4 times higher odds of receiving the DSP in the 12 months after the index date, and the Injured control group had 2 times higher odds. The Section 39 group also had 2 times higher odds than the Injured control group of receiving the DSP after workers compensation benefit cessation.

CARER PAYMENT OR AGE PENSION

Receipt of carer payments after the index date were less common than the NSA, DSP or the Age Pension for the Section 39 and Injured control group. Compared to the Community control group (4% in receipt of the Carer payment), 2% of the Injured control group received the Carer payment, and 4% of the Section 39 group.

Rates of the Age pension increased after the index date for each of the groups as people aged. The transition to the Age Pension in the 12 months after the index date was more common for the Injured control group (+9%), and the Section 39 group (+8%) compared to the Community control group (+2%).

Table 4. Number and percentage of people in study groups receiving Centrelink payments in the year before or after workers' compensation benefit cessation

Type of Payment	Section 39 Group		Injured Control Group		Community Control Group	
	Before	After	Before	After	Before	After
Any income support payment*	191 (6.9)	1669 (60.4)	559 (14.0)	1676 (42.1)	2689 (26.6)	3024 (29.9)
Newstart allowance	28 (1.0)	1120 (40.6)	197 (4.9)	623 (15.7)	951 (9.4)	914 (9.0)
Disability support pension	139 (5.0)	516 (18.7)	176 (4.4)	336 (8.4)	1148 (11.4)	1172 (11.6)
Age pension	11 (0.4)	209 (7.6)	144 (3.6)	516 (13.0)	69 (0.7)	303 (3.0)
Carer payment	14 (0.5)	110 (4.0)	30 (0.8)	91 (2.3)	403 (4.0)	402 (4.0)
<i>Total</i>	<i>2,761 (100.0)</i>		<i>3,980 (100.0)</i>		<i>10,114 (100.0)</i>	

Note: Pre-cessation defined as 365 to 14 days prior to cessation, and post-cessation is defined as 14 to 365 days after cessation for the Section 39 group and Injured Control group. The community control has a pseudo-cessation date of 25 December 2017. Welfare outcomes describe receipt of at least one form of regular basic payment within the respective time-interval.

MULTIPLE TYPES OF PAYMENTS

During the year after workers' compensation cessation, people could receive multiple forms of income support payments. The most common combination was Newstart and the DSP, with over 9% of the Section 39 group and 1.9% of the injured control group receiving both payments. A further 2% of the Section 39 group also received both Newstart and the Age Pension in the year after workers' compensation benefit cessation, and 1.2% received Newstart and the Carers Payment.

Table 5. Number and percentage of the Section 39 and Injured Control groups receiving different payment combinations in the year post-cessation

Payment combination post-cessation	Section 39 Group	Injured Control Group
DSP and NSA	258 (9.3)	75 (1.9)
NSA and AGE	57 (2.1)	< 5
NSA and CAR	34 (1.2)	24 (0.6)
DSP and AGE	7 (0.3)	< 5
DSP, NSA and AGE	5 (0.2)	< 5
Other combinations of NSA, DSP, CAR, AGE	< 5	< 5
	2,761 (100.0)	3,980 (100.0)

Note: DSP = Disability Support Pension; NSA = Newstart Allowance; AGE = Aged Pension; CAR = Carer Payment.

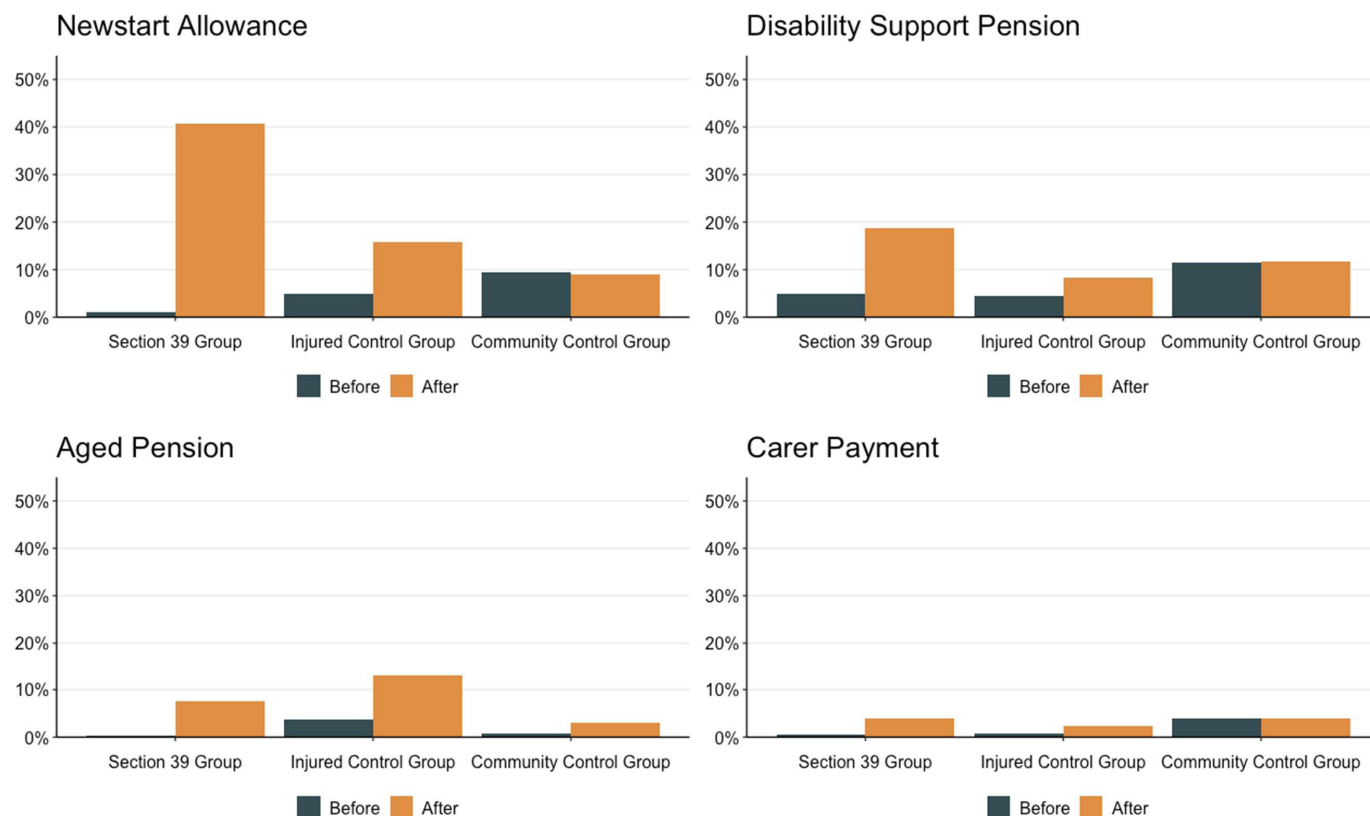


Figure 9. Centrelink payments received by the study groups in the year before and after workers' compensation cessation

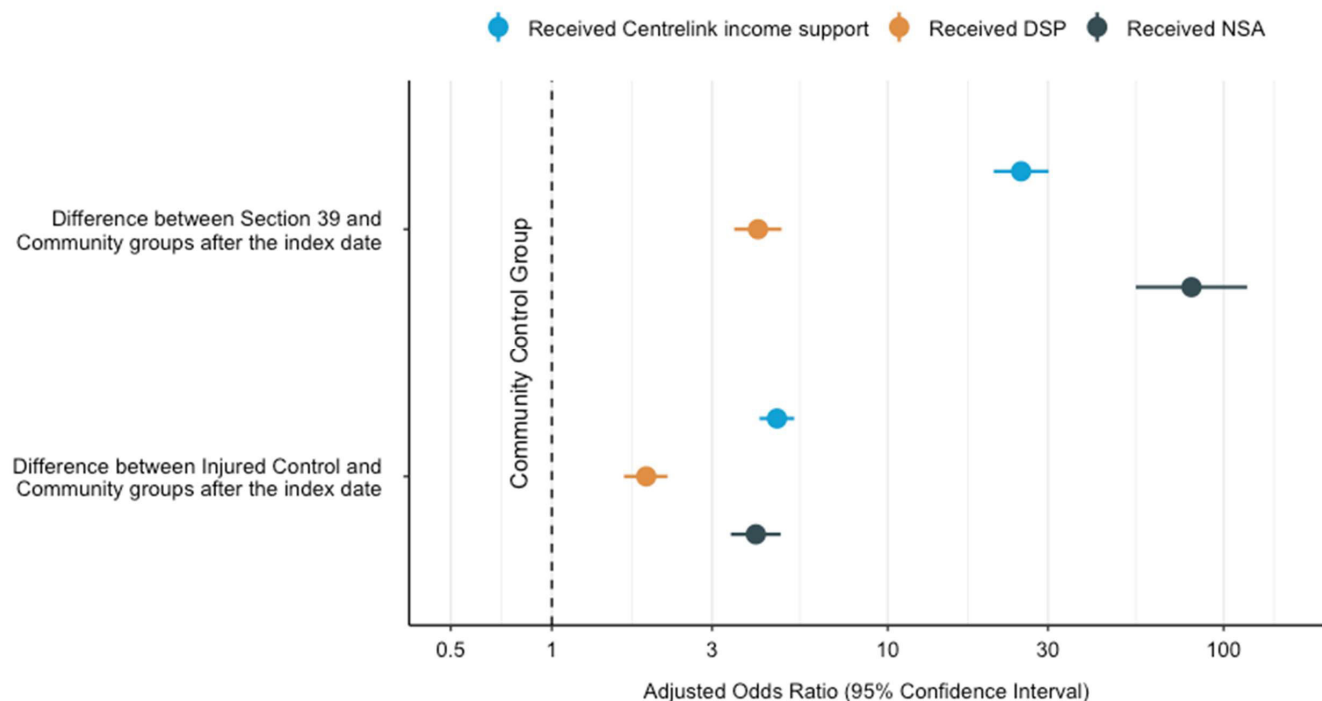


Figure 10. Adjusted Odds Ratios (AOR) and 95% confidence intervals from Generalised Estimating Equation comparing Centrelink payment receipt in the year after workers' compensation benefit cessation between groups.

Note: AOR are displayed on the x-axis on a log-scale. Comparison between the Section 39 and Community Control groups are shown at the top half of the figure, and comparisons between the Injured Control and Community Control groups at the bottom half. Full model results are shown in Appendix C.

Research Question #4

What demographic, social, work and health characteristics are associated with receipt of social welfare benefits among people affected by Section 39 of the Act?

ANY CENTRELINK PAYMENT

Within the Section 39 group, binary logistic regression models identified several sociodemographic indicators as being statistically associated with receipt of any Centrelink income support payment in the year after workers' compensation benefit cessation.

Indicators associated with greater odds of making the transition to a Centrelink payment included:

- being a single parent (4.3 times increased odds, denoted as 'x 4.3')
- not owning your own home (x 1.5)
- living in an area of relative socioeconomic disadvantage (x 1.7)
- living outside of a major city (x 1.4)
- being aged 65 years or older (x 2.8)
- having a workers' compensation claim exceeding 15 years duration (x 1.6), and
- receiving a Centrelink payment in the year before workers' compensation cessation (x 20)

Some factors were associated with reduced odds of making the transition to Centrelink, including

- having a workers' compensation claim for a mental health condition (1.7 times decreased odds),
- being involved in some form of common law action (1.6 times decreased odds).

Appendix E includes a detailed table of regression model output.

NEWSTART ALLOWANCE

Within the Section 39 group, the following indicators were associated with increased odds of transition to the Newstart Allowance:

- being male (x 1.59)
- being aged 55-64 years (x 1.39 compared to people aged 45-54 years)
- being single (not partnered) (x 2.6 to 2.7)
- living in an area of relative socioeconomic disadvantage (x 1.65)
- living outside of a major city (x 1.26)

- not owning your own home (x 1.49)

DISABILITY SUPPORT PENSION

Within the Section 39 group, the following indicators were associated with increased odds of transition to the DSP:

- being aged 55-64 years (x 1.39 compared to people aged 45-54 years)
- Being single without dependent children (x 1.75)
- Not owning your own home (x 1.38)
- Being born in Australia (x 1.39)
- Having had a longer duration workers' compensation claim (x 18.7 for 6-10 year claims, x 2.02 for 10-15 year claims, x 2.36 for claims over 15 years cumulative weeks of entitlement)
- Having had a compensable head injury (x 2.31)

Indicators associated with decreased odds of transition to the DSP were:

- Being aged over 65 years (x 0.09 compared to people aged 55- 64 years)
- Having had a compensable upper limb injury (x 0.69)

Research Question #5

Among people who receive social welfare payments after cessation of workers' compensation benefits, what is the timing of transitions to social welfare payment?

TIME TO FIRST CENTRELINK PAYMENT

Among those people in the Section 39 group who received Centrelink income support after their workers' compensation benefits ceased, around 61% had received their first payment within 31 days post-cessation, and 89% had received their first payment within 6 months. The comparable figures in the injured control group are 56% within 31 days post-cessation, and 86% within 6 months post-cessation. In both groups, a small proportion received their first Centrelink payment in the two-week period before their final workers' compensation income support payment, indicating rapid or 'early' transitions and potentially an anticipatory effect (see Figure 11).

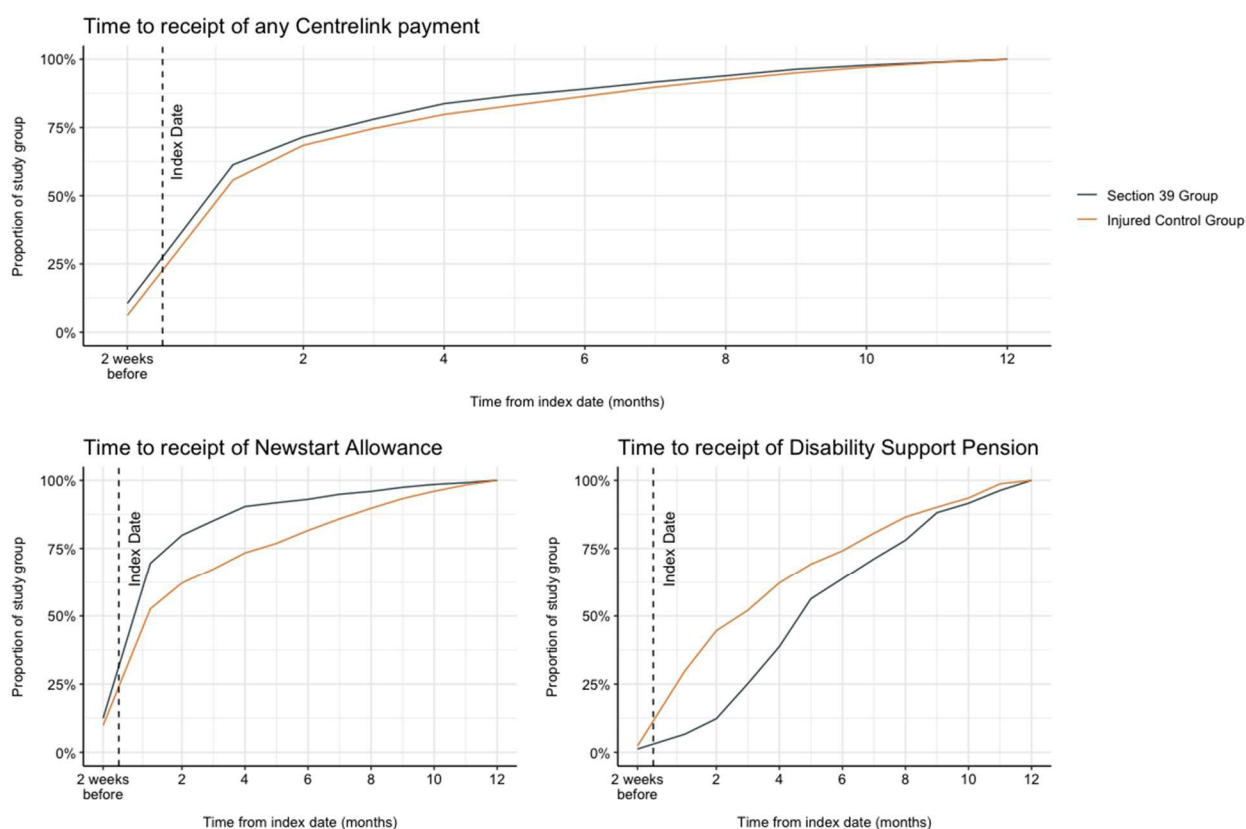


Figure 11. Time (months) from date of final workers' compensation payment to receipt of first Centrelink payment

CHANGES IN RECEIPT OF INCOME SUPPORT OVER TIME

For the Newstart Allowance, the time between final workers' compensation payment and first social security payment was relatively short, whereas there was a larger delay for many people to transition to their first DSP payments (Figure 12, Appendix F).

Seventy percent of the Section 39 group who transitioned to Newstart during the 12-month period post-cessation did so within the first month after cessation of workers' compensation payments. In contrast, transitioning to the DSP was much slower overall, with only 7% of the Section 39 group that transitioned to the DSP during the 12-month period post-cessation, doing so within 1 month. The median duration of transitioning to NSA was less than 1 month, compared to 4-5 months for transitioning to the DSP. The prevalence of the Age Pension increased at a constant rate over time.

Prior to workers' compensation cessation, around 5% of the Section 39 group were in receipt of regular basic DSP payments, and a small (<1%) number of people were receiving NSA, CAR, or AGE payments. Detailed analysis of the payments prior to WC cessation indicate that these are typically much smaller daily amounts than the respective maximum rates, whereas payments post-cessation typically corresponded to larger daily amounts. Payments following the final fortnightly workers' compensation payment were less common for the injured-worker control group compared to the Section 39 group, whereas payment during the 12 months prior were more common (Figure 2 and 3).

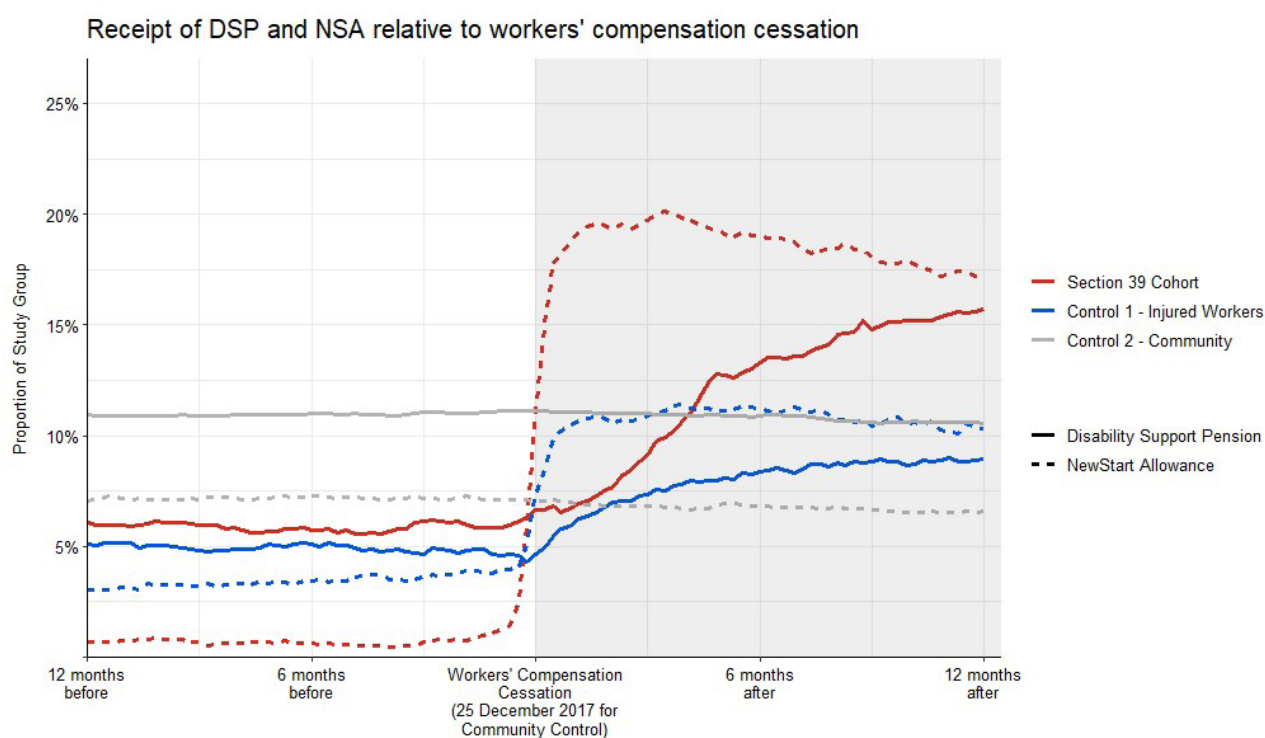


Figure 12. Weekly proportion of study group receiving DSP and NSA in the year before and after workers' compensation cessation

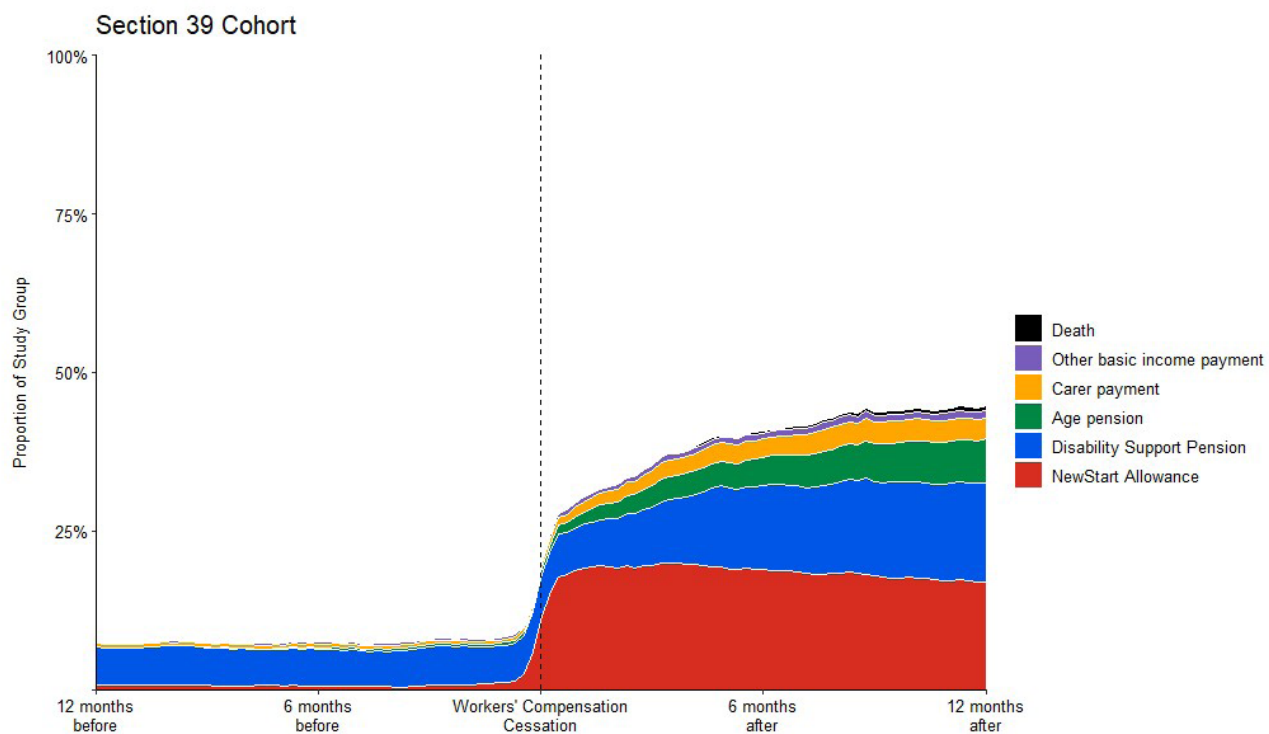


Figure 13. Weekly proportion of Section 39 Group receiving benefits in the year before and after workers' compensation cessation

DISCUSSION

MAIN FINDINGS

This study identifies that a large proportion of people with long-duration workers' compensation claims transitioned between the New South Wales workers' compensation and Commonwealth social welfare system in the year following cessation of their workers' compensation benefits. This transition was largest amongst people whose workers' compensation benefits ceased following amendments to Section 39 of the New South Wales workers' compensation legislation, which capped income support payments at 260 weeks for eligible workers whose permanent impairment was assessed as 20% or less.

Sixty percent of these workers received a Centrelink payment to support their income in the year after their workers' compensation benefits ceased, compared to 7% in the year before. Transitions to Centrelink were also observed in a control group of workers with long-duration claims but whose workers' compensation benefits did not cease due to the Section 39 amendment. Among this group, 42% received a Centrelink payment in the year after their workers' compensation benefits stopped, compared with 14% in the year before. In both groups, the proportion of people receiving Centrelink payments in the year after their workers' compensation benefits ceased was significantly greater than in a community control group. After adjusting for socio-demographic characteristics and prior Centrelink payment receipt, the Section 39 group has 25 higher odds of transitioning to Centrelink payments than the community control group, and the Injured Control group 5 higher odds.

We also observe that large proportions of people in both the Section 39 and injured control groups do not receive Centrelink payments in the first year after their workers' compensation benefits cease. While the financial outcomes for these people are not visible in our data, it is possible that some people in both groups returned to paid employment.

Another possible explanation is that some people do not return to employment and are ineligible to receive Centrelink payments, for example because they do not meet the income and assets tests applied to social welfare applicants. There is some evidence for this explanation in our data, as we observe significantly lower odds of receiving Centrelink payments post workers' compensation in people who own their own home, and those who are partnered and thus likely to have an alternative source of household income, as well as those with a common law action in the workers' compensation system who are more likely to have received a lump sum payment that would preclude them from receiving Centrelink payment for a period of time. It is also possible that some people seek other forms of financial support, for example through early withdrawals from their superannuation, or from a life insurance policy. Some may rely on their savings or investments for income, and still others may seek financial support from family or friends. It is also possible that some have no other sources of financial support. The myriad of potential transitions between sources of financial support for people with work disability in Australia has been described elsewhere¹¹.

The type of Centrelink payments received differed between study groups. In the year after workers' compensation cessation, people in the Section 39 group had significantly higher rates of DSP, Newstart Allowance and Age Pension receipt when compared to community controls, but were equivalent to the community controls in the proportion receiving the Carer payment. In contrast, the injured control group were more likely to receive the Newstart Allowance and the Aged Pension than community controls, but less likely to receive the DSP or Carer payment (Figure 9). People in the injured control group were also more likely to receive the Age Pension than those in the Section 39 group. One limitation of the study is that we do not know why workers' compensation benefits ceased among the injured control group, although given the relatively high rate of transition to the age pension it seems likely that for some people in this group the transition was triggered by reaching eligibility age for the aged pension. Other triggers

may have included return to paid employment, or being deemed to have capacity to work.

Our findings regarding the timing of transitions reflect the operation of the Australian social welfare system. People in both the Section 39 and Injured control groups transitioned rapidly onto the Newstart allowance, whereas transitions to the DSP were slower. This reflects the multi-stage application process for the DSP, which for many applicants requires compiling original medical evidence and other supporting documentation, completing a long claim form, attending medical and job capacity assessments, and completing an 18-month period of job finding or training, known as a 'Program of Support'^{19,20}. Most people who apply for the DSP are placed on the Newstart allowance while their DSP applications are assessed¹¹. There is evidence that the majority of DSP applications are rejected, with the grant rate reducing significantly since 2012 when eligibility rules were tightened¹⁸. Many people re-apply for DSP benefits on second and subsequent occasions following an initial rejection²⁰. One limitation of our study is the follow-up period of 12 months. Given the multi-stage, long and complex assessment process for the DSP, it is likely that with a longer follow-up period we would observe a greater transition from the injured worker groups onto the DSP. Longer follow-up periods may also enable examination of people moving in and out of employment after cessation of their workers' compensation benefits, as indicated by gaps in payment of unemployment benefits.

We note that the regulator of the New South Wales workers' compensation scheme put in place a number of initiatives to support workers in the Section 39 group approaching the end of their income support period. These included providing guidance to insurers to help them plan for worker transition and ensure that the workers degree of permanent impairment had been assessed; engaging with Centrelink to enable workers to start an application to Centrelink up to 13 weeks before their workers' compensation income support ceased; and requiring insurers to inform workers that their income support was ceasing 13 weeks in advance of the cessation; providing information on existing vocational and community supports; and making legal funding available through the Independent Legal Assistance and Review Service (ILARS). These initiatives are likely to have impacted the volume and speed of transitions between workers' compensation and Centrelink systems that we observe, though we do not have data at an individual level that enables us to examine their impacts statistically.

COMPARISON WITH PRIOR STUDIES

To our knowledge, this is the first Australian study examining the transition to other forms of income support after workers' compensation payments cease, and one of few globally. Most international studies are from North America, where workers' compensation and social welfare schemes are also operated independently between state, provincial and national governments. Some of this evidence is indirect, in that the studies report the percentage of people receiving a social welfare benefit who were previously injured at work¹³ or associate macro-level trends in social welfare receipt with tightening of workers' compensation benefit rules¹⁵. Other studies are from the 1990s and early 2000's^{13,15,17}, among workers' compensation and welfare systems that have subsequently been reformed. None report on different types of social welfare payments, include matched comparison groups, nor assess the impact of a specific change in workers' compensation benefit rules to later receipt of social welfare payments. We note that there is good information available on transitions between payment types within the Australian social welfare system²¹, however this does not extend to include data on people's sources of income support prior to entering the social welfare system. Given these differences in design, context and timing, it is very difficult to interpret our findings in respect of prior studies.

Perhaps the most relevant prior research is a study mapping the major systems of income support for Australians with work disability¹¹. This mixed methods project produced a flow diagram demonstrating

the hypothesised major movements of people between systems of income support, based on expert interview, analysis of prevalence data and system eligibility criteria. The study proposed that one of the major between-system transitions was people between 'short-tail' workers' compensation schemes (i.e., those with time capped income support payments) and downstream income support systems including ultimately the social welfare system. This prior study proposed a pathway from workers' compensation to unemployment benefits (Newstart) followed by a transition to the DSP for people with serious medical conditions and ongoing disability. The findings of the present study provide support for this proposed pathway. This prior study also proposed that a common exit from working age income support payments was onto the age pension. We also observe evidence of that transition in the present study.

IMPLICATIONS

People who make the transition from workers' compensation to Centrelink are moving from a system operated by a state government under a certain set of rules and procedures, to another operated by the Commonwealth government with a different set of rules and procedures. This movement between systems has multiple implications for injured workers. These include implications for their financial security, access to funding for healthcare and treatment, exposure to new and potentially burdensome administrative processes, and changes to obligations with respect to job seeking or training. Design and implementation of system policy changes, such as the NSW workers' compensation Section 39 legislative amendments, should take these potential impacts into account.

We note that during that people in the Section 39 cohort whose claims were made prior to 1 October 2021 were provided with a transitional fortnightly payment for the duration of the remaining 260-week income support period. This was a rate of \$920.90 per week initially, which was indexed and increased to \$1035.90 by late 2017. This meant that most people received an increase in their regular payments. However, the levels of income support available within the social welfare system are typically much lower than that in the NSW workers' compensation system. We previously estimated that the weekly expenditure per participant in an Australian short-tail workers compensation scheme was between A\$884 and A\$1179 (in 2015/16 dollars) compared with a much lower maximum of A\$447 for people receiving the DSP and A\$376 for people receiving the Newstart allowance¹¹. There is some evidence that injured workers who go on to receive Centrelink payments report higher levels of financial distress than both those who have returned to work and those continuing to receive workers' compensation benefits²². Financial stress has been associated with negative health, particularly mental health consequences, as well as lower likelihood of returning to paid employment²³⁻²⁵.

Financial support for healthcare and rehabilitation also vary between the systems. Within certain limits and subject to meeting eligibility requirements, workers' compensation systems pay for treatment and rehabilitation related to the compensable injury/illness and often secondary conditions arising from that injury/illness during the course of a claim. In contrast, the provision of social welfare payments is de-coupled from Commonwealth funded healthcare through the Medicare or pharmaceutical benefits schemes, with the exception that applicants are required to provide medical evidence to support applications for some benefits such as the DSP. We have previously observed that DSP and Newstart recipients have significantly greater healthcare utilisation than Australian wage earners, and these differences are not fully explained by differences in socio-demographic characteristics or the extent of medical conditions and disabilities²⁶. Our finding suggests that in addition to income support, there will be a transition from workers' compensation funded healthcare to Commonwealth funded healthcare. This will be the subject of a future report from the Transitions study.

Australians seeking to access social welfare payments are subject to the eligibility assessment practices

operated by Centrelink. For some payment types these are relatively straightforward, however for others such as the DSP they can involve significant burdens including the costs associated with applying for benefits and complying with scheme obligations, as well as psychological costs associated with potentially stressful application and assessment processes¹⁹. Evidence suggests that these processes can worsen health, particularly mental health²⁷⁻²⁹.

Finally, the responsibilities or mutual obligations imposed on benefit recipients differs between workers' compensation and social welfare systems. The Centrelink system imposes mutual obligations on Newstart recipients and on some younger people receiving the DSP. These include obligations to report any income from paid work regularly, and also obligations to seek employment and/or undertake training. People with serious medical conditions or reduced work capacity can be exempted from some or all of these obligations. Financial and other penalties, such as payment suspensions, can be applied to people who do not meet their mutual obligations. In workers' compensation schemes, people with long-duration claims also have certain responsibilities for job seeking, and are required to attend medical and occupational rehabilitation appointments as directed.

Another implication of our findings is that it is possible to identify which workers with long- duration claims are more likely to make the transition to social welfare payments. Some of these indicators related to eligibility for means-tested welfare payments. Those with a higher chance of transitioning to welfare were more commonly without a partner, did not own their own home, and lived in more disadvantaged socioeconomic areas. There were also trends associated with receipt of the DSP post-cessation based on the nature of injury, where people with compensable head injuries were more commonly in receipt of DSP, and people with injuries to upper limbs less commonly in receipt of DSP post- cessation. This could indicate differences in the severity of injuries in these locations, and also reflects processes involved in the assessment of impairment required for the DSP. People with compensable mental injuries also had lower odds of transitioning to Centrelink payments, which may reflect, in part, that this group experience the administrative processes associated with applying for Centrelink benefits as a greater barrier, than people with other medical conditions or disabilities. Workers' compensation authorities could collect and use these markers to identify and support people to more effectively transition to the social welfare system.

STRENGTHS AND LIMITATIONS

One of the study strengths is the large sample sizes, enabling us to estimate with confidence the proportion of Section 39 and injured worker groups who transition from workers compensation to social welfare benefits. The Section 39 group included complete capture of those exposed to the NSW Section 39 legislative amendment during its period of implementation from late 2017 until mid-2018. Another strength is the inclusion of a matched community control group, which enabled us to compare the transitions to Centrelink payments in the study groups to that occurring in the community. The data linkage method achieved very high rates of linkage, providing confidence in the representativeness of our findings. The linkage of retrospective data enabled us to examine social welfare receipt both before and after cessation of workers' compensation benefits, and to incorporate the 'before' state into statistical analysis, providing a more accurate estimate of the rate of transition once workers' compensation benefits ceased, rather than simply examining receipt of social welfare payments in the period after workers' compensation benefits ceased. Data linkage also meant that we were able to examine multiple socio-demographic predictors of social welfare receipt including indicators not usually captured in workers' compensation data and that reflect eligibility for Centrelink payments, such as home ownership status and partner status. Social welfare data was sufficiently detailed to enable examination of different types of income support payments and also to explore the timing with which people accessed different payments, providing a more nuanced understanding of transitions between systems.

Some study limitations include the lack of data on people who do not transition to the Centrelink system from workers' compensation. These groups represent a large proportion of both the Section 39 and injured control groups, yet we are blind to the sources of income support (if any) they access in the year after workers' compensation cessation. We also do not have data on injured workers who were assessed as having greater than 20% permanent impairment who were exempted from the Section 39 legislation. However, we note that it is very likely that people with these very serious impairments continued to receive workers' compensation benefits. We have insufficient data to conduct an analysis on the precise level of financial support provided to people in the workers' compensation and social security systems. While it seems clear that payments in the social welfare system are capped at a much lower level than those available through the workers' compensation scheme, we are not able to present data on the actual amount of payments made. Our Section 39 group is constructed predominantly of people with claims existing prior to the NSW legislative amendments came into effect on 1 October 2012. Patterns of Centrelink payment receipt in people with later claims, who were entering a workers' compensation scheme with a 260-week income support limit, may differ. For the current report, we treated receipt of Centrelink income support as a binary outcome (Y/N) in the year after or before cessation of workers' compensation benefits, but did not measure the total number of payments, nor transitions between payment types (e.g. NSA to DSP). This may be the subject of a future analysis.

NEXT STEPS

This is the first of multiple reports to be produced from the Transition Study. Future reports will examine hospitalisation and health service use in the three study groups before and after cessation of workers' compensation benefits. The primary purpose of these subsequent analyses will be to determine whether the Section 39 group experienced significant changes in health and health service use after their workers' compensation benefits were stopped, compared to both injured control and community control groups.

We also plan to conduct further analysis of social welfare payments data. For example, among the injured control group we have a longer period of follow-up post workers' compensation cessation, as many of these claims ended in the 2000's and 2010's. This will allow us to examine social welfare payments over a longer period of time, and to identify patterns in social welfare payments (e.g., movement in and out of the Centrelink system which may indicate periods of employment and unemployment, and also movement between different payment types).

It is notable that many people in the Section 39 and injured control groups did not have a record of a Centrelink payment in the year after their workers' compensation benefits ceased. It is unclear how these individuals are supporting themselves, and the adequacy of this support, from this study. More research is needed to identify the prevalence of income support from family, friends and communities, the use of savings and assets, and returns to paid employment in these people.

This is one of few studies to examine post-claim outcomes of Australians with accepted workers' compensation schemes. There is a clear need for further studies on the many thousands of Australians who exit workers' compensation systems every year without returning to work: at present this is a substantial knowledge gap. Determining the health, financial, employment and social outcomes of those workers is crucial to assess the effectiveness of workers' compensation schemes, and the potential long-term impacts of being injured at work and claiming workers' compensation.

CONCLUSIONS

This study sought to answer the question “What happens to workers with long duration workers’ compensation claims when their workers compensation benefits stop?” and more specifically to examine the transition of people with long-duration claims between the NSW workers’ compensation and Commonwealth Centrelink systems after the implementation of the Section 39 legislative amendments.

We find that 1 in 4 injured workers with long-duration claims transition to receiving Centrelink payments in the year after the workers’ compensation benefits stop. In those workers whose benefits stopped due to the Section 39 amendment, the transition to welfare was more than double at around 1 in 2. People affected by Section 39 were much more likely to transition to the Newstart Allowance and the DSP than other long-term injured workers and the community. It seems clear that the Section 39 legislative amendments triggered the movement of the majority of affected people with very long term claims (5 + years) from the workers’ compensation system onto the Australian social welfare system operated by Centrelink. Social, demographic, household, health and claim characteristics predicted who would make the transition. Design and implementation of system level policy changes, such as the Section 39 legislative amendments, should take these findings into account, and consider the potential health, economic and social impacts of between-system transition on people with long periods of work incapacity following a work injury.

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APPENDIX A - COVARIATES

Outcome	Description
Weeks of Entitlement	
Number of weeks (as defined by the insurance regulator)	The calculation of weeks of entitlement, by the insurance regulator, in the context of section 39(1) differed based on the date of injury (for people with accepted work loss claims). Individuals injured prior to 1 Oct 2012 were considered to be 'existing members', and this was subject to The Workers Compensation Amendment (Transitional Arrangements for Weekly Payments) Regulation 2016, which made further transitional arrangements in respect to the application of section 39 of the Act. Existing members count of weeks of entitlement began on 1 Jan 2013, whereas weeks of entitlement were counted from the date of injury for workers injured on, or after, 1 Oct 2012. As a result, the earliest application of section 39(1) was 26 September 2017, whereby an additional cohort of existing members saw their payments cease from 24/25 December 2017.
Homeownership	Calculated at the cessation date. In instances of internal inconsistency in DOMINO, the most recent household record start state was chosen.
Yes	Jointly / single owns or purchasing home, purchasing home, owns jointly with their
No	Non-homeowner, lives elsewhere, Non-homeowner in Government funded Aged Care, lives in a special residence, lives in special residence, deemed interest, purchased life tenancy, lives in nursing home
Relationship status	Calculated at the cessation date. In instances of internal inconsistency in DOMINO, the most recent household record start state was chosen.
Single	Single, divorced, separated, widowed
Partnered	Married, de facto, registered
Dependent Children	Calculated at the cessation date.
Yes	Children aged under 18 years of age at the cessation date.
No	No record of any children aged under 18 years of age at the cessation date.
Country of birth	
Overseas	Any record of country of birth in a country other than Australia.
Australia	Records stating exclusively Australia as a country of birth.
Socioeconomic area	Calculated at the cessation date. In instances of internal inconsistency in DOMINO, the most recent household record start state was chosen. Categories are quintiles from the Index of Relative Advantage and Disadvantage (Socioeconomic index for Areas)
Advantaged	Most advantaged quintile
Moderate	Middle three quintiles
Disadvantaged	Most disadvantaged quintile

APPENDIX B - OVERVIEW OF STUDY GROUPS

Overview of the Section 39 group and control groups.

Study Group	Section 39 N (%)	Injured control N (%)	Community control N (%)
Gender			
Female	1269 (46.0)	1508 (37.9)	4578 (45.3)
Male	1492 (54.0)	2472 (62.1)	5536 (54.7)
Age			
18 to 34 years	45 (1.6)	282 (7.1)	330 (3.3)
35 to 44 years	218 (7.9)	653 (16.4)	1109 (11.0)
45 to 54 years	750 (27.2)	1184 (29.7)	2950 (29.2)
55 to 64 years	1508 (54.6)	1200 (30.2)	5289 (52.3)
65 or more years	240 (8.7)	661 (16.6)"	436 (4.3)
Relationship / Marital status			
Single without dependent children	946 (34.3)	1207 (30.3)	2882 (28.5)
Partnered without dependent children	1147 (41.5)	1595 (40.1)	3373 (33.3)
Single with dependent children	272 (9.9)	423 (10.6)	894 (8.8)
Partnered with dependent children	341 (12.4)	641 (16.1)	1751 (17.3)
Unknown	55 (2.0)	114 (2.9)	1214 (12.0)
Homeownership			
Yes	1398 (50.6)	1895 (47.6)	4658 (46.1)
No	1076 (39.0)	1590 (39.9)	3936 (38.9)
Unknown	287 (10.4)	495 (12.4)	1520 (15.0)
Country of birth			
Australia	1807 (65.4)	2702 (67.9)	6999 (69.2)
Not Australia	925 (33.5)	1213 (30.5)	2909 (28.8)
Unknown	29 (1.1)	65 (1.6)	206 (2.0)
Socioeconomic area			
Moderate	1379 (58.1)	2033 (51.1)	4298 (56.0)
Advantaged	192 (8.1)	365 (9.2)	749 (9.8)
Disadvantaged	803 (33.8)	1094 (27.5)	2624 (34.2)
Unknown	387 (14.0)	488 (12.3)	2443 (24.2)

Remoteness			
Major Cities	1521 (55.1)	2408 (60.5)	4961 (64.7)
Regional	841 (30.5)	1074 (27.0)	2667 (34.8)
Remote	12 (0.4)	12 (0.3)	44 (0.6)
Unknown	387 (14.0)	486 (12.2)	2442 (24.1)
Nature of injury			
Injury and poisoning	2225 (80.6)	3131 (78.7)	-
Musculoskeletal System and Connective Tissue	245 (8.9)	349 (8.8)	-
Mental disorders	187 (6.8)	375 (9.4)	-
Other	61 (2.2)	97 (2.4)	-
Unknown	43 (1.6)	28 (0.7)	-
Location of injury			
Head	45 (1.6)	69 (1.7)	-
Lower Limbs	361 (13.1)	556 (14.0)	-
Multiple locations	287 (10.4)	461 (11.6)	-
Neck	56 (2.0)	103 (2.6)	-
Non-physical locations	187 (6.4)	383 (9.6)	-
Systemic locations	8 (0.3)	12 (0.3)	-
Trunk	1179 (42.7)	1376 (34.6)	-
Unknown	41 (1.5)	24 (0.6)	-
Upper limbs	597 (21.6)	996 (25.0)	-
Weeks of Entitlement			
104 to 259 weeks (2 to 5 years)	-	1849 (46.5)	-
260 to 311 weeks (5 to 6 years)	311 (11.3)	341 (8.6)	-
312 to 519 weeks (6 to 10 years)	824 (29.8)	810 (20.4)	-
520 to 779 weeks (10 to 15 years)	770 (27.9)	721 (18.1)	-
780 weeks or more (15+ years)	856 (31.0)	259 (6.5)	-
Common law action			
Yes	170 (6.2)	507 (34.73)	-
None recorded	2591 (93.8)	3473 (87.3)	-
Total	2,761 (100.0)	3,980 (100.0)	10,114 (100.0)

Notes: Time-dependent values are described at the workers compensation time loss payment cessation date, which is defined as 25 Dec 2017 (i.e. median cessation date of the Section 39 group) for the community control group.

APPENDIX C - SUMMARY OF STATISTICAL MODEL OUTPUT

Generalised estimating equations for Centrelink income support payments or benefits received during the 12 months before or after workers compensation cessation.

Models A. Odds Ratios [95% Confidence intervals]	Received Centrelink income support	Received DSP	Received NSA
Exposure: Timing of payment * Study group			
Before * Section 39	0.24* [0.22, 0.26]	0.56* [0.50, 0.62]	0.15* [0.14, 0.17]
Before * Injured control	0.50* [0.46, 0.54]	1.39* [1.22, 1.58]	0.56* [0.50, 0.63]
Before * Community control	0.85* [0.83, 0.87]	0.98* [0.96, 0.99]	1.05 [1.00, 1.10]
After * Section 39	4.87* [4.18, 5.68]	2.42* [2.02, 2.90]	10.15* [6.96, 14.82]
After * Injured control	2.22* [2.01, 2.45]	2.77* [2.35, 3.26]	2.00* [1.71, 2.34]
After * Community control	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
Post hoc-tests			
Difference between Section 39 and Community after (controlling for differences before)	17.46* [14.98, 20.35]	4.24* [3.62, 4.95]	69.52* [47.71, 101.30]
Difference between Injured group and Community after (controlling for differences before)	3.78* [3.45, 4.14]	1.95* [1.70, 2.23]	3.72* [3.20, 4.32]
Difference between Section 39 group and Injured control after (controlling for differences before)	4.62* [3.88, 5.50]	2.18* [1.77, 2.67]	18.69* [12.54, 27.87]
Models B. Adjusted (demographics) Odds Ratio [95% Confidence intervals]	Received Centrelink income support	Received DSP	Received NSA
Exposure: Timing of payment * Study group			
Before * Section 39	0.26* [0.23, 0.29]	0.64* [0.56, 0.74]	0.15* [0.13, 0.17]
Before * Injured Control	0.58* [0.53, 0.64]	1.21* [1.04, 1.41]	0.54* [0.47, 0.61]
Before * Community Control	0.82* [0.79, 0.85]	0.98* [0.96, 1.00]	1.05 [1.00, 1.11]
After * Section 39	7.81* [6.52, 9.36]	2.71* [2.24, 3.28]	11.25* [7.71, 16.42]
After * Injured Control	3.32* [2.93, 3.76]	2.37* [1.98, 2.83]	2.07* [1.74, 2.47]
After * Community Control	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
Post hoc-tests			
Difference between Section 39 and Community after (controlling for differences before)	24.95* [20.66, 30.13]	4.11* [3.49, 4.83]	80.22* [54.77, 117.50]
Difference between Injured group and Community after (controlling for differences before)	4.68* [4.15, 5.27]	1.91* [1.64, 2.21]	4.05* [3.41, 4.80]
Difference between Section 39 group and Injured control after (controlling for differences before)	5.34* [4.30, 6.62]	2.16* [1.73, 2.68]	19.83* [13.16, 29.88]

Models C. Adjusted (demographics and injury claim details) Odds Ratios [95% Confidence intervals]			
	Received Centrelink income support	Received DSP	Received NSA
Exposure: Timing of payment * Study group			
Before * Section 39	0.08* [0.07, 0.09]	0.27* [0.22, 0.33]	0.07* [0.06, 0.09]
Before * Injured Control	0.18* [0.16, 0.20]	0.51* [0.44, 0.59]	0.26* [0.22, 0.30]
After * Section 39	2.31* [1.89, 2.83]	1.16 [0.90, 1.50]	6.02* [3.95, 9.19]
After * Injured Control	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
Post hoc-tests			
Difference between Section 39 group and Injured control after (controlling for differences before)	5.27* [4.26, 6.51]	2.21* [1.77, 2.76]	21.06* [13.75, 32.27]

Footnotes:

Model A. Generalised estimating equations. Repeated subject=person id, within-subject= Pre or post. Link=logit. Corr=AR1. Not adjusted for demographics or details of injury claim.

Model B. Same as Model A, however also adjusted for gender, age group, partner and dependent children status, homeownership, country of birth, socioeconomic area, remoteness. Model B was not adjusted by details describing injury or workers' compensation claims.

Model C. Same as Model B and additionally adjusted for the nature of injury: Weeks of Entitlement, Nature of Injury, Location of Injury, Common law action.

APPENDIX D - CENTRELINK PAYMENT RECEIPT IN SECTION 39 GROUP

Summary statistics for Centrelink income support payments received after workers' compensation cessation in the Section 39 group.

	Any Centrelink income support		Disability Support Pension		Newstart Allowance	
	Number (%) in receipt post index date	Number (%) not in receipt post index date	Number (%) in receipt post index date	Number (%) not in receipt post index date	Number (%) in receipt post index date	Number (%) not in receipt post index date
Total	1669 (60.4)	1092 (39.6)	516 (18.7)	2245 (81.3)	1120 (40.6)	1641 (59.4)
Gender						
Female	725 (57.1)	544 (42.9)	224 (19.2)	1025 (80.8)	422 (33.3)	847 (66.7)
Male	944 (63.3)	548 (36.7)	272 (18.2)	1220 (81.8)	698 (46.8)	794 (53.2)
Age						
18 to 34 years	29 (64.4)	16 (35.6)	9 (20.0)	36 (80.0)	18 (40.0)	27 (60.0)
35 to 44 years	154 (70.6)	64 (29.4)	49 (22.5)	169 (77.5)	103 (47.2)	115 (52.8)
45 to 54 years	457 (60.9)	293 (39.1)	155 (20.7)	595 (79.3)	320 (42.7)	430 (57.3)
55 to 64 years	850 (56.4)	658 (43.6)	294 (19.5)	1214 (80.5)	639 (42.4)	869 (57.6)
65 or more years	179 (74.6)	61 (25.4)	9 (3.8)	231 (96.3)	40 (16.7)	200 (83.3)
Relationship / Marital status						
Single without dependent children	707 (74.7)	239 (25.3)	232 (24.5)	714 (75.5)	18 (40.0)	27 (60.0)
Partnered without dependent children	537 (46.8)	610 (53.2)	176 (15.3)	971 (84.7)	103 (47.2)	115 (52.8)
Single with dependent children	236 (86.8)	36 (13.2)	67 (24.6)	205 (75.4)	320 (42.7)	430 (57.3)
Partnered with dependent children	183 (53.7)	158 (46.3)	41 (12.0)	300 (88.0)	679 (38.8)	1069 (61.2)
Homeownership						
Yes	779 (55.7)	619 (44.3)	219 (15.7)	1179 (84.3)	482 (34.5)	916 (65.6)
No	796 (74.0)	280 (26.0)	270 (25.1)	806 (74.9)	569 (52.9)	507 (47.1)
Country of Birth						
Australia	1119 (61.9)	688 (38.1)	379 (21.0)	1428 (79.0)	747 (41.3)	1060 (58.7)
Not Australia	550 (59.5)	375 (40.5)	137 (14.8)	788 (85.2)	373 (40.3)	552 (59.7)
Socioeconomic area						
Middle	819 (59.4)	560 (40.6)	267 (19.4)	1112 (80.6)	551 (40.0)	828 (60.0)
Advantaged	97 (50.5)	95 (49.5)	27 (14.1)	165 (85.9)	62 (32.3)	130 (67.7)
Disadvantaged	549 (68.4)	254 (31.6)	158 (19.7)	645 (80.3)	382 (47.6)	421 (52.4)
Remoteness						
Major Cities	894 (58.8)	627 (41.2)	261 (17.6)	1260 (82.8)	610 (40.1)	911 (59.9)

Regional or Remote	571 (66.9)	282 (33.1)	191 (22.4)	662 (77.6)	385 (45.1)	468 (54.9)
Weeks of entitlement						
260 to 311 weeks (5 to 6 years)	170 (54.7)	141 (45.3)	43 (13.8)	268 (86.2)	125 (40.2)	186 (59.8)
312 to 519 weeks (6 to 10 years)	498 (60.4)	326 (39.6)	148 (18.0)	676 (82.0)	338 (41.0)	486 (59.0)
520 to 779 weeks (10 to 15 years)	458 (59.5)	312 (40.5)	143 (18.6)	627 (81.4)	290 (37.7)	480 (62.3)
780 weeks or more (15+ years)	543 (63.4)	313 (36.6)	182 (21.3)	674 (78.7)	367 (42.9)	489 (57.1)
Nature of injury						
Injury and poisoning	1379 (62.0)	846 (38.0)	417 (18.7)	1801 (81.3)	927 (41.7)	1298 (58.3)
Diseases of the Musculoskeletal System and Connective Tissue	144 (58.8)	101 (41.2)	36 (14.7)	209 (85.3)	100 (40.8)	145 (59.2)
Mental disorders	82 (43.9)	105 (56.1)	38 (20.3)	149 (79.7)	53 (28.3)	134 (71.7)
Other	42 (68.9)	19 (31.1)	16 (26.2)	45 (73.8)	27 (44.3)	34 (55.7)
Location of injury						
Head	31 (68.9)	14 (31.1)	14 (31.1)	31 (68.9)	19 (42.2)	26 (57.8)
Lower Limbs	228 (63.2)	133 (36.8)	63 (17.5)	298 (82.5)	150 (41.6)	211 (58.4)
Multiple locations or systemic	173 (58.6)	122 (41.4)	54 (18.3)	241 (81.7)	114 (38.6)	181 (61.4)
Neck	37 (66.1)	19 (33.9)	12 (21.4)	44 (78.6)	23 (41.1)	33 (58.9)
Non-physical locations	84 (44.2)	106 (55.8)	38 (20.0)	152 (80.0)	55 (28.9)	135 (71.1)
Trunk	733 (62.2)	446 (37.8)	236 (20.0)	943 (80.0)	516 (43.8)	663 (56.2)
Upper limbs	363 (60.8)	234 (39.2)	90 (15.1)	507 (84.9)	232 (38.9)	365 (61.1)
Common law action						
Yes	97 (57.1)	73 (42.9)	28 (16.5)	142 (83.5)	70 (40.5)	100 (59.5)
None recorded	1572 (60.7)	1019 (39.3)	488 (18.8)	2103 (81.2)	1050 (40.5)	1541 (59.5)
Received any income Centrelink payment before workers compensation cessation						
No	1483 (57.7)	1087 (42.3)				
Yes	186 (97.4)	5 (2.6)				
Received DSP during the 12 months pre-cessation						
No			389 (14.8)	2233 (85.2)		
Yes			127 (91.4)	12 (8.6)		
Received NSA during the 12 months pre-cessation						
					1097 (40.1)	1636 (59.9)
					23 (82.1)	5 (17.9)

APPENDIX E - SUMMARY OF REGRESSION MODELS

Binary regression models for receipt of Centrelink payments after workers' compensation cessation by injured study group.

Centrelink payment type received post-cessation	Adjusted Odds Ratio [95% Confidence Interval]		
	Any income support payment	Disability Support Pension	Newstart Allowance
Study Group	Injured Control	Injured Control	Injured Control
N (%) in receipt of payment post cessation included in model	1430 (46.5)	294 (9.6)	538 (17.5)
N (%) not in receipt of payment post cessation included in model	1648 (53.5)	2784 (90.4)	2540 (82.5)
Gender			
Female	1.27* [1.06, 1.51]	1.01 [0.75, 1.36]	0.64* [0.51, 0.80]
Male	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
Age			
20-44	0.85 [0.67, 1.10]	0.34* [0.21, 0.53]	0.94 [0.70, 1.26]
45-54	0.88 [0.71, 1.09]	0.63* [0.45, 0.89]	0.95 [0.74, 1.23]
65+	9.63* [7.06, 13.14]	0.03* [0.01, 0.07]	0.02* [0.00, 0.06]
55-64	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
Marital status and dependent children			
single no child	1.07 [0.82, 1.38]	1.67* [1.03, 2.71]	3.15* [2.22, 4.48]
partner no child	0.63* [0.49, 0.82]	1.27 [0.79, 2.05]	1.50* [1.04, 2.15]
single and child	2.26* [1.66, 3.08]	0.87 [0.47, 1.63]	2.51* [1.68, 3.73]
partner and child	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
Homeownership			
no homeowner	1.61* [1.33, 1.94]	1.16 [0.84, 1.60]	1.71* [1.35, 2.17]
homeowner	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
Country of birth			
Not Australia	1.27* [1.05, 1.55]	0.91 [0.65, 1.29]	1.59* [1.25, 2.03]
Australia	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)

Socioeconomic area			
Disadvantage	1.69* [1.23, 2.34]	1.11 [0.63, 1.96]	1.47 [0.97, 2.22]
Middle	1.15 [0.85, 1.55]	0.96 [0.56, 1.64]	1.09 [0.73, 1.62]
Advantage	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
Residential area			
Regional / Remote	1.24* [1.02, 1.50]	1.17 [0.84, 1.63]	1.36* [1.06, 1.73]
Cities	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
Weeks of entitlement			
10-15yrs	1.34 [0.94, 1.91]	2.80* [1.35, 5.82]	1.11 [0.70, 1.77]
15+yrs	1.45 [0.91, 2.30]	2.57* [1.08, 6.12]	1.48 [0.81, 2.72]
6-10yrs	1.31 [0.93, 1.85]	294 (9.6)	1.31 [0.84, 2.04]
5-6yrs	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
2-5 years	1.04 [0.76, 1.43]	1.80 [0.89, 3.62]	1.14 [0.76, 1.71]
Nature of injury			
Musculo	1.01 [0.74, 1.36]	1.03 [0.62, 1.72]	0.98 [0.68, 1.42]
Mental	0.39* [0.27, 0.55]	0.51* [0.26, 0.99]	0.32* [0.18, 0.54]
Other	0.77 [0.45, 1.31]	0.96 [0.37, 2.49]	0.47* [0.22, 1.00]
Injury and Poison	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
Location of injury			
Head	0.68 [0.35, 1.31]	0.50 [0.13, 1.90]	0.80 [0.35, 1.84]
Neck	0.84 [0.49, 1.42]	1.06 [0.46, 2.43]	1.02 [0.53, 1.95]
Upper Limb	0.89 [0.71, 1.10]	0.59* [0.40, 0.88]	1.03 [0.79, 1.34]
Lower limb	0.92 [0.70, 1.21]	0.72 [0.45, 1.13]	0.88 [0.64, 1.23]
Multiple / systemic	0.92 [0.70, 1.21]	0.84 [0.52, 1.34]	0.89 [0.63, 1.26]
Non-physical	N/A	N/A	N/A
Trunk	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
Common law action			
No common law	2.79* [2.12, 3.67]	4.65* [2.48, 8.70]	2.92* [2.03, 4.20]
Common law	1.00 (ref.)	1.00 (ref.)	1.00 (ref.)
Received Centrelink payment pre-cessation			
Any payment	7.83* [5.88, 10.43]		
None	1.00 (ref.)		

DSP		65.90* [40.12, 108.25]	
No DSP		1.00 (ref.)	
NSA			8.11* [5.67, 11.59]
No NSA			1.00 (ref.)

Missingness: Section 39 group N=651 (23.6% of group total), Injured worker group N=1994 (25.7% of group total). Non-physical injury location is exclusive to Mental injury

APPENDIX F – TIME TO FIRST CENTRELINK PAYMENT

Duration between workers' compensation cessation and transitioning to Centrelink payments.

Month post-cessation	Any Centrelink payment		NSA		DSP	
	Section 39	Injured Control	Section 39	Injured Control	Section 39	Injured Control
2 weeks prior	150 (10.6%)	111 (6.1%)	142 (12.5%)	81 (9.9%)	< 5	9 (2.3%)
1	871 (61.3%)	1006 (55.7%)	789 (69.5%)	432 (52.6%)	27 (6.7%)	115 (29.8%)
2	1016 (71.5%)	1236 (68.5%)	906 (79.8%)	510 (62.1%)	50 (12.3%)	172 (44.6%)
3	1108 (78.0%)	1347 (74.6%)	967 (85.2%)	553 (67.4%)	102 (25.2%)	201 (52.1%)
4	1189 (83.7%)	1440 (79.8%)	1026 (90.4%)	602 (73.3%)	157 (38.8%)	240 (62.2%)
5	1232 (86.8%)	1501 (83.2%)	1042 (91.8%)	631 (76.9%)	228 (56.3%)	267 (69.2%)
6	1265 (89.1%)	1560 (86.4%)	1056 (93.0%)	670 (81.6%)	258 (63.7%)	286 (74.1%)
7	1302 (91.7%)	1620 (89.8%)	1077 (94.9%)	705 (85.9%)	288 (71.1%)	311 (80.6%)
8	1334 (93.9%)	1670 (92.5%)	1089 (95.9%)	737 (89.8%)	316 (78.0%)	334 (86.5%)
9	1368 (96.3%)	1715 (95.0%)	1106 (97.4%)	766 (93.3%)	357 (88.1%)	348 (90.2%)
10	1389 (97.8%)	1753 (97.1%)	1118 (98.5%)	788 (96.0%)	371 (91.6%)	361 (93.5%)
11	1405 (98.9%)	1783 (98.8%)	1125 (99.1%)	807 (98.3%)	390 (96.3%)	381 (98.7%)
12	1420 (100.0%)	1805 (100.0%)	1135 (100.0%)	821 (100.0%)	405 (100.0%)	386 (100.0%)