

# Evaluating the impact of the 2012 legislative amendments to the NSW workers' compensation scheme.

A quasi-experimental policy study

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July 2018



Collie A, Lane TJ, Beck D, Sheehan LR, Gray SE. **Evaluating the impact of the 2012 legislative amendments to the NSW workers' compensation scheme.** Insurance Work and Health Group, Monash University: Melbourne; 2018. DOI: 10.26180/5c353a4ec498e.

- The COMPARE project is supported financially by SafeWork Australia and WorkSafe Victoria.
- Data for the project is provided with the support of the following organisations: SafeWork Australia, WorkSafe Victoria, State Insurance Regulatory Authority of NSW, ReturntoWorkSA, WorkCover Tasmania, WorkSafe NT, Office of Industrial Relations QLD Government, WorkCover WA, Comcare, ACT Government.
- These organisations are all represented on the project advisory group, in addition to the Australian Council of Trade Unions and the AiGroup.
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- The views expressed in this document are those of the authors and do not necessarily represent those of the project funders, data providers or members of the project advisory group.

- Time loss claims = accepted workers' compensation claims where wage replacement compensation has been paid to the worker.
- Medical only claims = accepted claims where only medical/treatment expenses have been paid and no time loss payments have occurred.
- Rejected claims = applications for compensation that were rejected (not accepted) by the insurer.
- Pending claims = applications for compensation where a decision to accept or reject the claim has not yet been made.
- Journey claims = claims for injury or illness occurring when travelling to and from work.
- Incidence = the number of claims expressed as a rate per 1000 workers who were covered by the NSW workers' compensation scheme. In this study we calculated the incidence per month.
- Interrupted Time Series = the statistical technique used in this study to compare claim incidence in the period before the 2012 legislative amendments with incidence after the amendment.

- Multiple studies have shown that the legislative design of injury compensation systems can have large and significant impacts on injured person outcomes including access to system benefits, self-rated health, return to work and duration of time lost to injury (see following slides).
- Historical review of changes to injury compensation legislation demonstrate that financial circumstances commonly drive scheme reform, while considerations such as health and equity are less commonly cited as reasons for reform (Brownbill, 2015).
- Rigorous evaluations of the impacts of legislative changes are rare, although we have recently reported a quasi-experimental method for such evaluation (Lane et al, 2018).
- In 2012 substantial changes were made to the New South Wales workers' compensation system via legislative amendment. The changes were specifically designed to restore the scheme to a more secure financial state, following a period of sustained financial stress.
- This study evaluates the impact of the NSW scheme reforms on claim incidence, and in groups of workers directly affected by the legislative amendments.

- **Cassidy et al (2000)** evaluated the impact of changing from a tort-based motor vehicle crash compensation system to a no-fault system in the Canadian province of Saskatchewan. This major scheme reform led to a substantial reduction in the number of whiplash claims and in claim duration.
- **Cameron et al (2008)** reported improved self-rated health outcomes following the introduction of legislative amendments to the New South Wales motor vehicle crash compensation system in 1999.
- **Lane et al (2018)** used interrupted time series analysis to demonstrate the impacts of legislative amendments to reduce employer injury reporting time in the South Australian and Tasmanian workers' compensation systems.
- **Collie et al (2016)** showed that time lost to injury varies substantially between Australian workers' compensation systems, after accounting for worker, workplace and injury factors. This study suggests that scheme design and management have a substantial impact on disability duration.
- **Elbers et al (2016)** reported significant differences in perceived fairness and self-reported health among clients of the tort-based NSW and the no-fault VIC motor vehicle compensation schemes.

# Overview of the NSW Workers Compensation Legislation Amendment Act (2012)

## Policy objective

Ensure financial sustainability of the NSW scheme

The amendments made multiple changes to scheme design across the four areas below. This study specifically evaluates the impact of some elements of these changes as marked by a red asterisk.\*  
Future studies will evaluate the impact of the other elements.

## What changed?

### Eligibility for benefits

### Time limited benefits

### Changing benefit levels

### New Processes

\* Disease (incl. mental health), heart attack and stroke only compensable if employment was the main contributing factor. Effective 19 June 2012.

\* Journey claims require real and substantive connection between employment and accident/injury. Effective 19 June 2012.

Income benefits cease at retirement age.

Removal of lump sum for pain and suffering.

Lump sum for permanent impairment restricted to workers with > 10% whole person impairment.

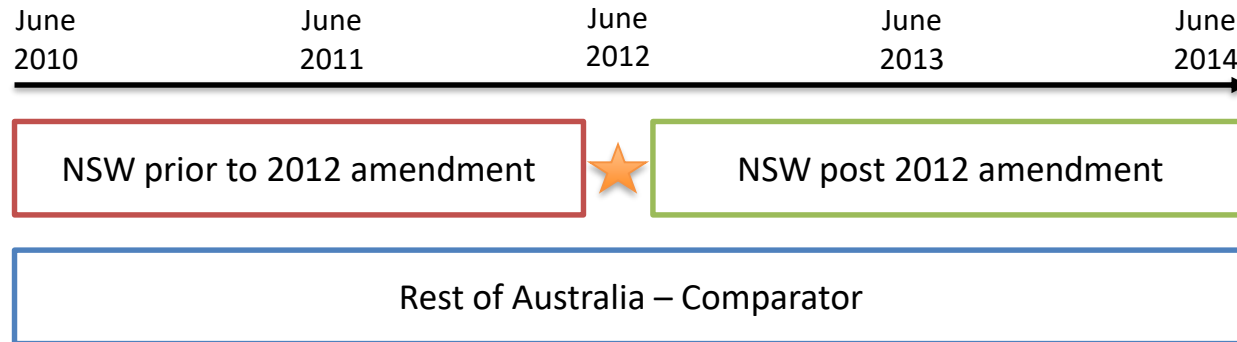
## Were any groups exempted?

\* Firefighters, Paramedics, Police and Coal Miners were exempted from application of the amendments. Effective 19 June 2012.

## Research questions:

1. What was the impact of the 2012 legislative amendments to eligibility on the incidence of time loss and medical only claims?
2. What was the impact of the 2012 legislative amendments to eligibility on the incidence of disease claims compared with other types of injury?
3. What was the impact of the legislative amendments to eligibility on the incidence of journey claims compared with other mechanisms of injury?
4. What was the impact of the legislative amendments to eligibility on the incidence of claims by firefighters, police, paramedics and coal miners compared with workers in other occupations?



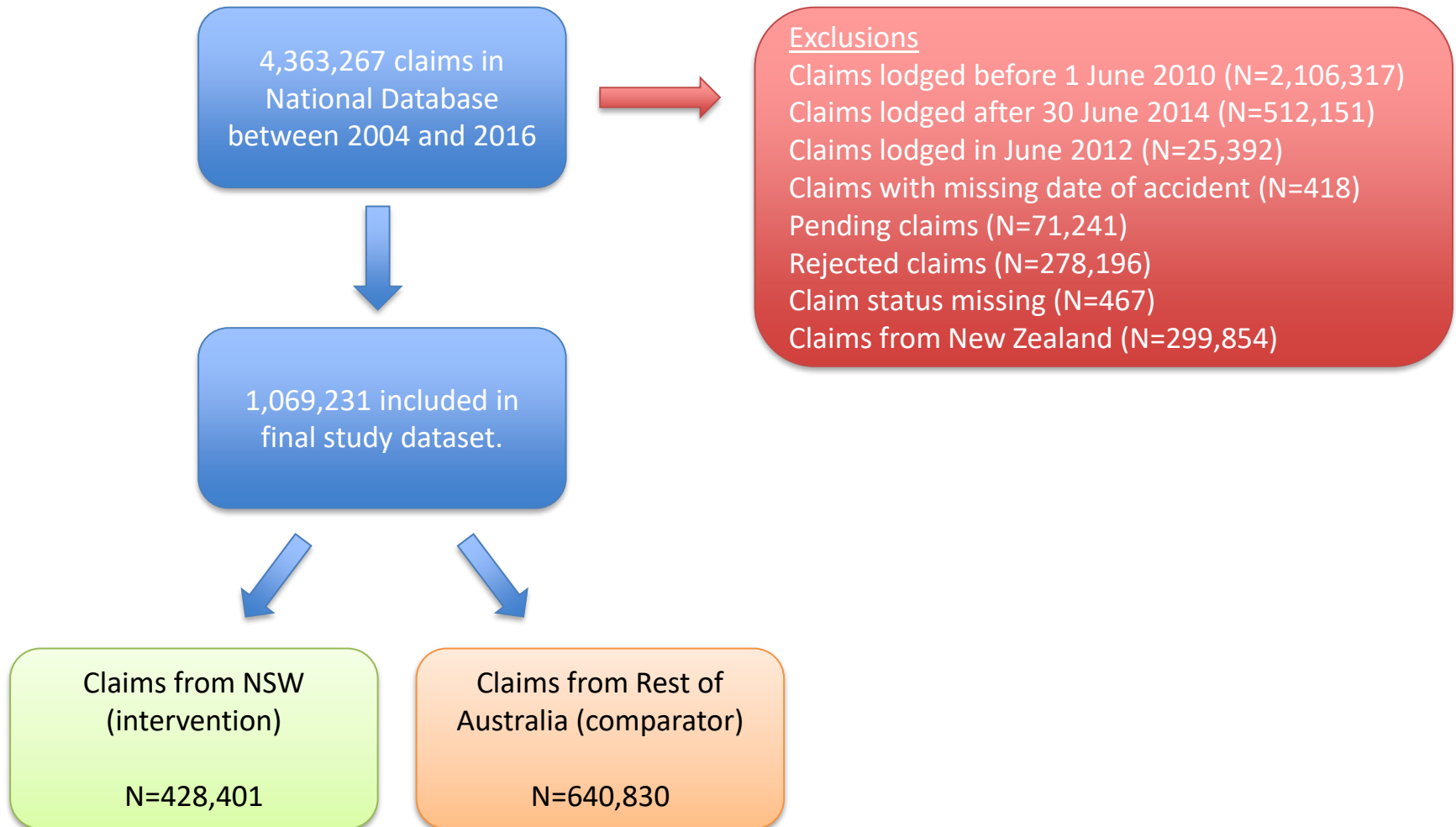


## Interrupted Time Series (ITS) analysis

Compare claim incidence in NSW for 2 years before the legislative amendment to claim incidence in NSW for 2 years after the legislative amendment.

Contemporaneous data from seven other Australian workers' compensation jurisdictions used as comparator (VIC, QLD, SA, WA, TAS, NT, ACT). Comparator adjusted to the same scale.

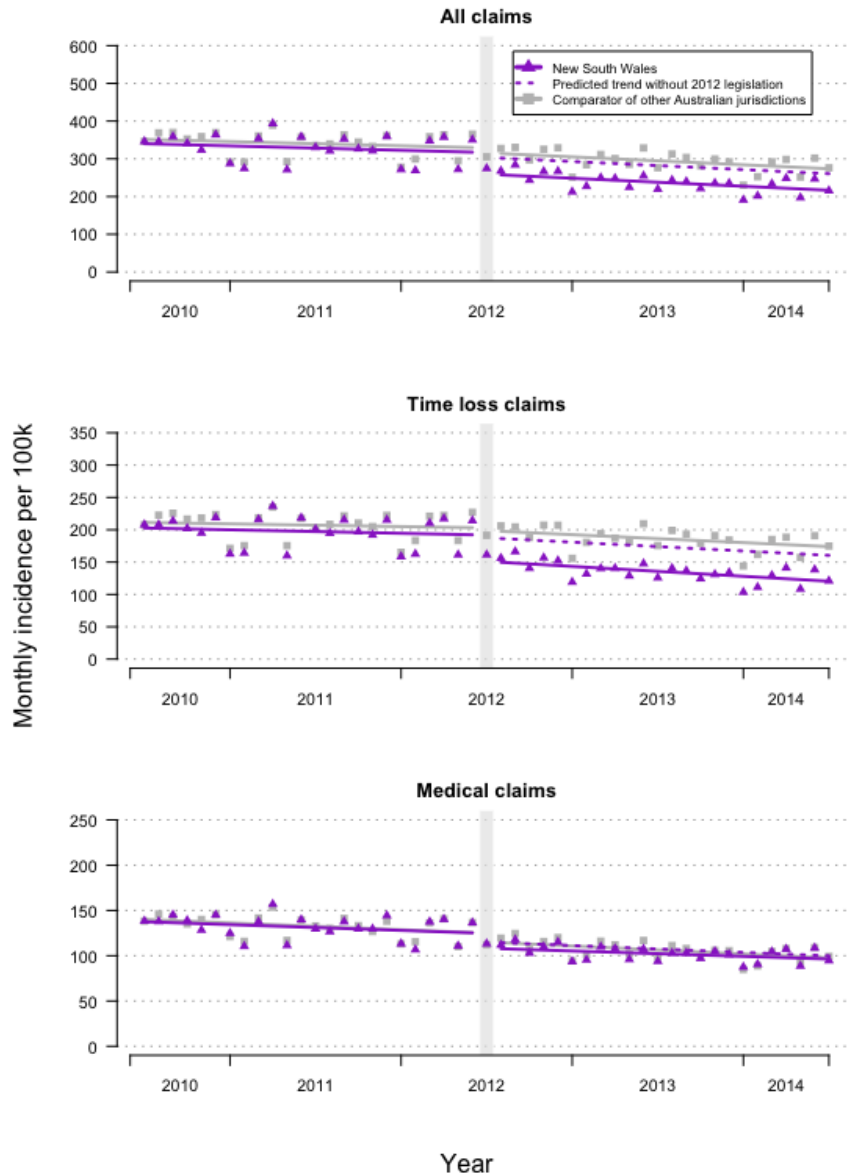
Data from the month of implementation (June 2012) excluded from time series.



# Sample Characteristics

	New South Wales		Rest of Australia	
N (row %) of accepted claims	428,401	40.1	640,830	59.9
<b>Sex</b>				
N (%) female	156,652	(36.6)	222,764	(34.8)
N (%) male	271,749	(63.4)	418,065	(65.2)
<b>Age band</b>				
N (%) 15 to 34 years	155,074	(36.2)	231,627	(36.1)
N (%) 35 to 54 years	198,450	(46.3)	298,257	(46.5)
N (%) 55 + years	74,632	(17.4)	110,594	(17.3)
<b>Injury Type</b>				
N (%) Disease	36,748	(8.6)	129,250	(20.2)
N (%) Psych injury	14,179	(3.3)	23,074	(3.6)
N (%) Other injury	377,474	(88.1)	488,506	(76.2)
<b>Duty Status</b>				
N (%) journey claims	20,627	(4.8)	17,158	(2.7)
N (%) non-journey claims	407,774	(95.2)	623,672	(97.3)
<b>Occupation</b>				
N (%) police, fire, ambulance, miner	17,147	(4.0)	16,191	(2.5)
N (%) other occupations	409,994	(95.7)	619,948	(96.7)
N (%) missing	1,260	(0.3)	4,691	(0.7)

# Results (1) – Overall incidence



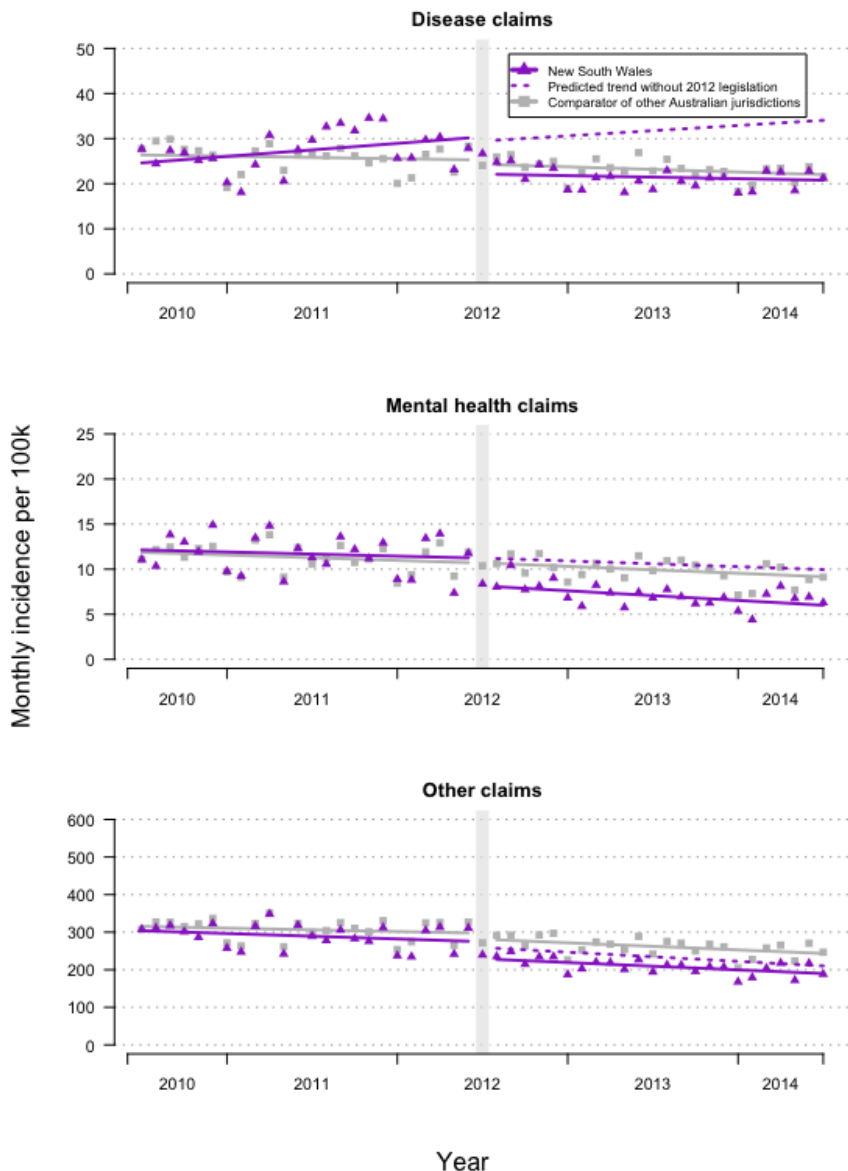
Overall, there was a reduction in the monthly claim incidence of 44.2 claims per 100,000 covered workers (95% CI: -57.1 to -31.4;  $p < .001$ ) immediately following the 2012 legislative amendments. This was equivalent to a 14.6% reduction in claims incidence.

The effect was larger among time loss claims, which decreased by 19.6% or 36.5 claims per 100,000 workers per month (95% CI: -45.6 to -27.4;  $p < .001$ ).

The reduction in medical only claims was 5.7% or 6.7 claims per 100,000 covered workers per month (95% CI: -11.5 to -1.9;  $p = .008$ ).

All changes were level or immediate changes; there were no changes to the long-term trend.

## Results (2) – Disease, Mental Health & Other Injury Claims



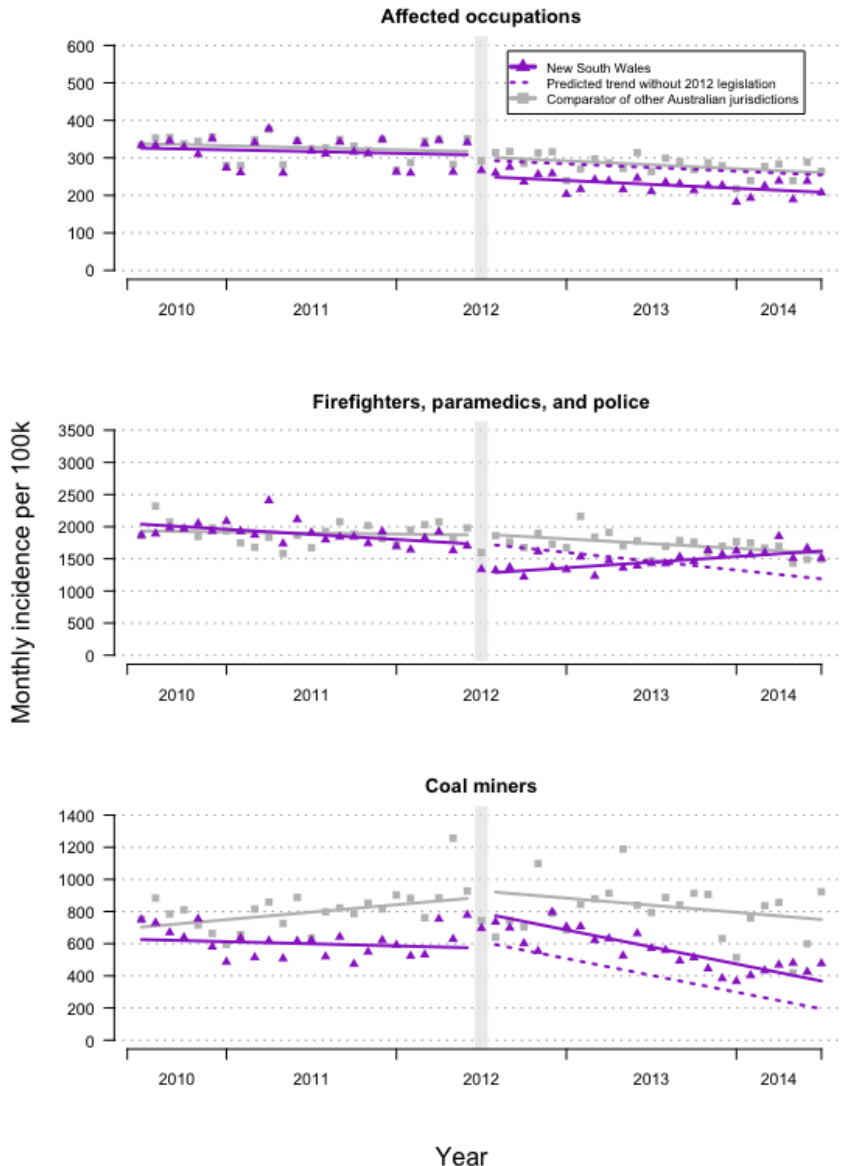
There was a 25.7% reduction in the incidence of disease claims immediately following the introduction of the 2012 legislative amendments. This is equivalent to 7.3 fewer disease claims per 100,000 covered workers per month (95% CI: -11.6 to -3.1;  $p = .001$ ).

There was a 27.9% reduction in the incidence of mental health condition claims (-3.1 claims per 100k workers per month; 95% CI: -3.5 to -2.6;  $p < .001$ ) along with a long-term trend reduction (-0.04; 95%: -0.06 to -0.01;  $p = .009$ ).

There was a smaller but still statistically significant 11.4% reduction in the monthly incidence of other claims (-29.7 claims per 100k workers per month; 95% CI: -40.7 to -18.7;  $p < .001$ ).

The incidence of claims for the Rest of Australia was steady throughout the time series.

# Results (3) – Exempted occupations vs Other occupations



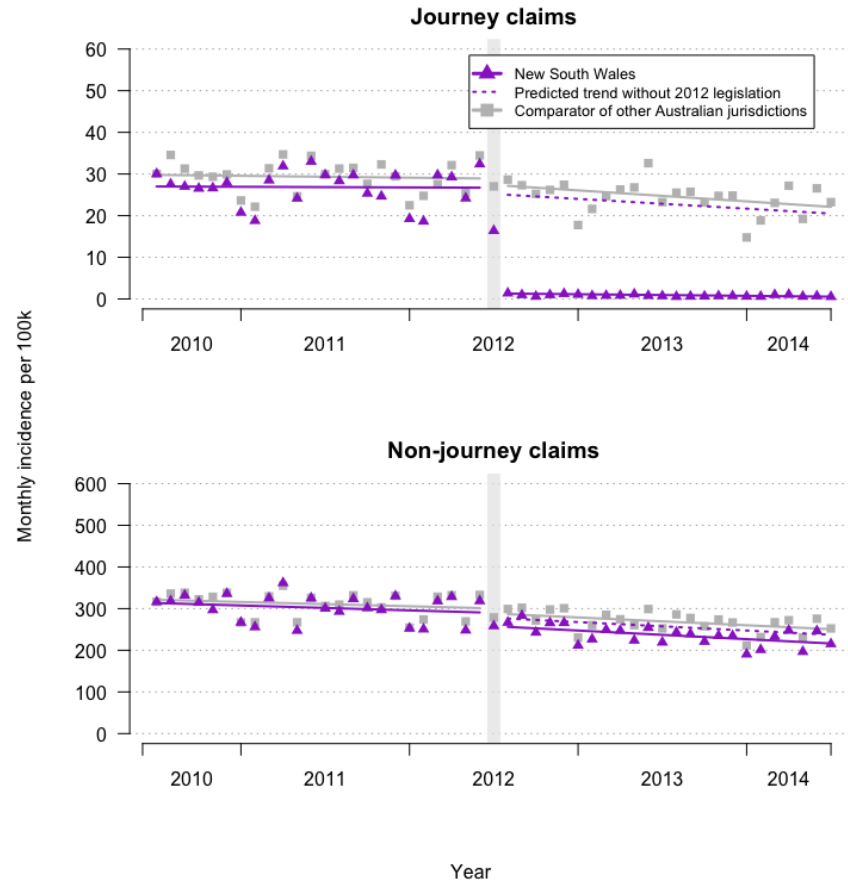
There was an immediate 14.9% reduction in claims incidence among occupations affected by the 2012 legislative amendments (i.e., those not exempted). This drop represents 43.6 fewer claims per 100,000 covered workers (95% CI: -55.9 to -31.3;  $p = .001$ ).

There was a larger immediate 24.7% reduction in claim incidence among firefighters, paramedics, and police (-464.0 claims per 100k workers; 95% CI: -673.9 to -254.7;  $p < .001$ ), who were exempted from the application of the legislative amendments.

However, this was followed by a long-term trend increase that was also statistically significant (37.48 claims per 100k per month; 95% CI: 22.85 to 52.11;  $p < .001$ ).

Coal miners, who were also exempted, had a 30.1% increase in claims incidence (179.8 claims per 100k workers per month; 95% CI: 50.4 to 309.4;  $p = .008$ ). There was also a long-term reduction, but this was not significantly different from that observed nationally.

# Results (4) – Journey vs other claims



Journey claims decreased by 94.8% following the 2012 Amendments (-23.9 claims per 100k workers per month; 95% CI: -25.0 to -22.8;  $p < .001$ ).

At the same time, non-journey claims decreased by 7.2% (-19.9 claims per 100k workers; 95% CI: -31.4 to -8.4;  $p = .001$ ).

Given the absolute magnitudes of reduction in journey (-23.9) and non-journey claims (-19.9), these results suggest they contributed roughly equally to the reduction in overall incidence of claims, though a slightly larger proportion can be attributed to journey claims.

- The 2012 legislative amendments in New South Wales had a major impact on claiming, with a 14.6% overall reduction in claim incidence. The effect was a step reduction without changes to the trend, implying a major immediate impact.
- The largest impact was in journey claims, where a 94.8% reduction in incidence occurred, virtually removing such claims from the scheme.
- Overall, workers making time-loss claims were more affected with a reduction of 19.6%, and a smaller 5.7% reduction in medical expense only claims.
- By type of condition, the effects were larger among disease and mental health condition claims, which were specifically targeted by the legislation.
- Claiming increased among coal miners, who were exempted from the legislative amendments.
- Claims incidence initially decreased by one-quarter among the other group of exempted workers (firefighters, paramedics, and police) but this was followed by an increase in incidence over the two year follow up period.



## Strengths

- Population based national case-level dataset with standardised injury, occupational and industry coding between jurisdictions, and a substantial time series before and after the policy event being evaluated.
- Ability to compare changes in NSW to a national comparator of the Rest of Australia.
- Interrupted Time Series analysis is one of the most robust analytical techniques for examining policy impact.
- Using claims data, we were able to compare legislative effects among specific target groups.

## Limitations

- We have not yet analysed the impact on other claim indicators including duration of time loss, or claims processing time. This will be the subject of future study.

- The 2012 legislative amendments in New South Wales resulted in a large reduction in claims entering the scheme. This contributed to the scheme returning to a positive financial position as demonstrated in recent actuarial valuations.
- The impact of the amendments was substantial at 14.6% overall reduction in incidence.
- The impact of the amendments were not evenly distributed. Workers with disease and mental health condition claims, and those making time loss claims were more affected than those with injury and medical only claims. Journey claims were virtually eliminated from the scheme.
- New South Wales accounts for nearly 40% of all workers' compensation claims in Australia, and so this represents a significant event in the national data.
- Workers' compensation claims are the primary source of data used to determine the success of occupational health and safety initiatives. This study demonstrates clearly that large changes in claims data can occur independent of changes in health and safety. This suggests the need for alternative OHS metrics that are not susceptible to such effects.
- The 2012 NSW changes were wide ranging. This study has evaluated some specific components of the legislative amendment and is limited to claim incidence as the outcome. Future analysis of the same dataset will determine the impact of the 2012 amendment on time loss and on indicators of claims handling.

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