

Final Report

The Cross Sector Project

Mapping Australian Systems of Income Support
for People with Health-Related Work Incapacity

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2018

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786,000

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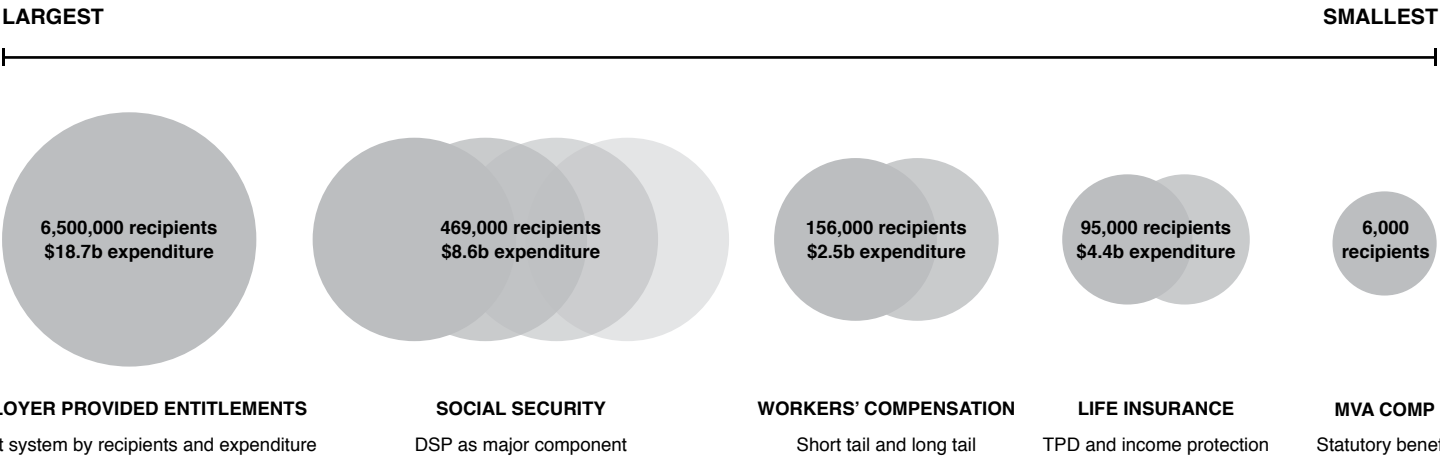
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\$37.2 B

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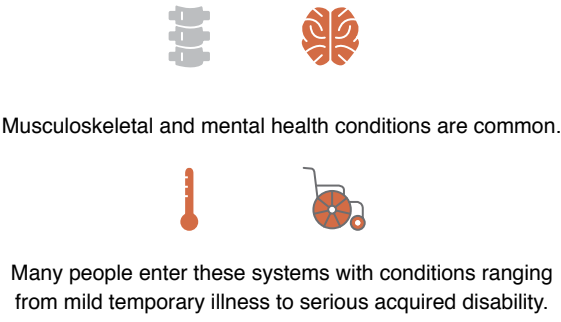
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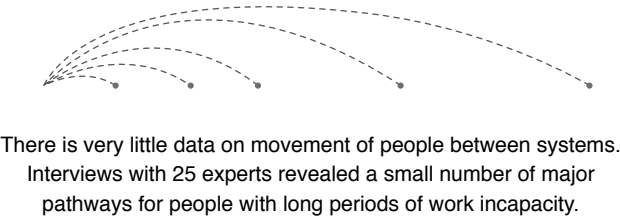
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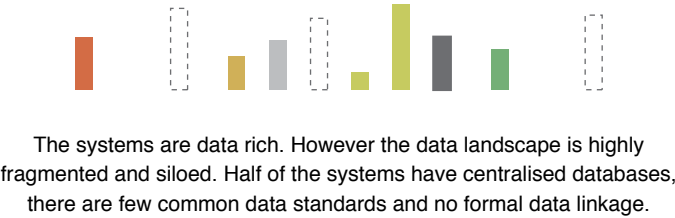
COMMON MEDICAL CONDITIONS



MOVEMENT BETWEEN SYSTEMS



SYSTEM DATA



IDENTIFIED OPPORTUNITIES TO IMPROVE WORK AND HEALTH



Abbreviations

ANZSCO	Australian and New Zealand Standard Classification of Occupations
ANZSIC	Australian and New Zealand Standard Industrial Classification
APRA	Australian Prudential Regulation Authority
AWE	Average Weekly Earnings
CTP	Compulsory Third Party
DSP	Disability Support Pension
DHS	Department of Human Services
DSS	Department of Social Services
DVA	Department of Veterans Affairs
IP	Income Protection
MADIP	Multi-Agency Data Integration Project
MBS	Medical Benefits Schedule
MVA	Motor Vehicle Accident
NDIS	National Disability Insurance Scheme
NDS	National Database of Compensation-Based Statistics
NIISQ	National Injury Insurance Scheme – Queensland
PBS	Pharmaceutical Benefits Schedule
PIA	Priority Investment Approach
PIAWE	Pre Injury Average Weekly Earnings
RTW	Return to Work
TOOCS	Type of Occurrence Classification System
TPD	Total and Permanent Disability
WADL	Western Australia Data Linkage

Executive Summary

In Australia during the 2015/16 financial year an estimated 786,000 people who were unable to work due to ill health, injury or disability received income support from a commonwealth, state, territory or private source. An additional 6.5 million people accessed employer provided leave entitlements for short periods of work incapacity. A total of \$37.2 billion was spent on income support for these people during the year. This support was provided through a complex array of government authorities, private sector insurers and employers. While the majority of people return to paid employment following a period of temporary incapacity, a significant minority experience longer periods of work incapacity and access income support from multiple systems.

This project (the Cross Sector project) mapped ten major systems of income support in Australia, including Employer Provided Entitlements, Workers' Compensation (short-tail and long-tail schemes), Motor Vehicle Accident (MVA) compensation (lump sum and statutory benefit schemes), Life Insurance (income protection and total and permanent disability schemes), Defence and Veterans Affairs compensation and pension, Superannuation withdrawals, and Social Security (Youth Allowance, NewStart Allowance, Sickness Allowance and Disability Support Pension).

The systems are variously regulated by state, territory and commonwealth government authorities. The approach to system governance and benefit delivery varies substantially. A diverse mix of public, for-profit private and not-for-profit entities are involved in case management, administering income support payments and service provision.

Each system has a unique set of rules and processes for determining who is eligible to access income support, the level of support provided, and the duration for which support will be provided. The systems vary substantially with respect to the primary health conditions among benefit recipients and the demographic profile of recipients. While musculoskeletal and mental health conditions are the most common, individuals may enter these systems with a wide range of health conditions ranging from mild temporary illness to serious acquired disability. The duration of benefit provision also varies markedly, ranging from days to decades.



786,000 people who were unable to work due to ill health, injury or disability received income support.

Stock of Income Support Recipients

Using publicly available data and data provided by members of the Collaborative Partnership to Improve Work Participation, it was possible to estimate the number of people accessing each benefit system for the 2015/16 financial year, as well as total income support expenditure and recipient rates per 1000 working age population. We also calculated the range (minimum and maximum) of income support provided in each system for a hypothetical person working full time and earning the national Average Weekly Earnings (AWE) prior to ceasing work.

The largest system by volume of recipients and expenditure was employer provided entitlements (N=6.5 million recipients and \$18.7 billion expenditure in 2015/16). However, the duration of benefit provision in this system is typically very short term, in the order of days or weeks. The second largest system by volume and expenditure was social security (469,000 recipients; \$8.6 billion expenditure), with the DSP being the major component. Workers' compensation (155,000 recipients; \$2.5 billion) and Life Insurance (95,000 recipients; \$4.4 billion) systems were the next largest in terms of both volume and expenditure. Other systems were smaller in magnitude. For example we estimated that there were 5,856 active recipients in the MVA statutory benefit systems, and 24,000 active recipients of Defence and Veterans compensation.

The weekly amount of income support provided also varied substantially. A person earning the national average wage of \$1,506 (\$1,179 net of income tax) prior to condition onset would typically receive 100% of their usual wage while on employer provided sick leave, dropping to \$219 per week (or 18.5% of usual wage) if receiving Youth Allowance. The minimum single DSP payment equates to 34.5% of national net AWE or \$407 per week, prior to addition of any supplements. Workers' compensation, life insurance (income protection), MVA and DVA compensation systems provide between 75% and 100% of usual earnings (\$884 to \$1179 per week in our example). The lump sum systems provide average payments in the \$80k to \$120k range, although receipt of lump sums may preclude people from subsequently accessing other sources of support.

In addition to these formal systems, personal and family resources such as savings and partner income is a further source of income support. Personal resources may be particularly important in people with long periods of incapacity, or during gaps in coverage, for example during waiting periods for lump sums or life insurance policy payments.



Personal and family resources such as savings and partner income are further sources of income support.

Movement Between Systems

Our document review identified three published analyses that contained some information regarding the movement of benefit recipients from one system to another (the flow).

These examples were from the social security, life insurance (TPD) and MVA compensation (statutory benefits) systems. For example, the DSS Priority Investment Approach baseline valuation report identifies large categories of entry and exit from each of the social security benefits.

The information contained in these documents, while helpful, provides limited insight into the flow of people between systems. While there are international studies, we were unable to identify any Australian analysis of other system interactions, such as the impact that changes in the boundaries of one system (e.g., restriction or expansion of eligibility) may have on other systems. This lack of documented information and data was confirmed through interviews.

The experts interviewed were able to make proposals regarding movement of recipients between systems, based on their experience within a given system. For example interviewees from life insurance systems suggested that approximately 30% to 50% of people making life insurance TPD claims have previously been in contact with a workers' or MVA compensation system during the same episode of work incapacity. Interview data was used to develop a set of hypothesised major pathways between systems.

Analysis of system policy revealed that nine factors effectively determine eligibility or access to specific systems, and thus influence the likely pathways between systems. These factors relate to the person, their illness or injury, employment and personal circumstances, and include things such as the mechanism of injury, the state or territory of residence, employer, partner status and income.



9 factors effectively determine eligibility or access to specific systems.

Service Provision

There is a wide variation in both the type of services funded and the models of service delivery. Case management was the only service provided across all systems, however models of case management varied markedly.

Six systems funded return to work (RTW) services. The most structured and widely delivered RTW services are provided by employers and workers' compensation schemes. Four systems routinely fund healthcare and treatment. In other systems people may be provided with limited funding for healthcare or rely on the public healthcare system or private health insurance cover.

Workers' compensation, motor vehicle accident (statutory benefit), life insurance and social security systems fund or provide access to job finding or employment services. Some social security benefits require recipients to engage with job finding services.

Data

The systems are data rich, and all have structured administrative datasets in some form. While some systems have well organised and centralised databases with complete or near complete capture of cases within that system (e.g., social security) others have limited structured data sources dispersed across multiple organisations. Overall the data landscape is highly fragmented and siloed, and whilst half of systems have centralised data sources, there are currently no formal linkage of databases between systems.

Data are variously collected by employers, insurers, regulators and system administrators. Workers compensation, life insurance and superannuation systems require or encourage aggregation of data to a centralised database. These centralised databases contain minimum datasets (workers' compensation) or are limited to de-identified and aggregated summary information (life insurance and superannuation).

Some systems have adopted consistent data definitions and coding standards, for example use of the ANZSCO occupation and ANZSIC industry classification systems, and the Type of Occurrence Classification System (TOOCS) is widespread in the workers compensation. However there is very little consistency between systems, presenting a significant barrier for analysis and interpretation of findings.

Two datasets may provide some information on the movement of people between systems. These are data held by the Australian Taxation Office (as most income support payments are taxable) and social security data. The latter includes information on employment income during periods in which a person is claiming a social security benefit. Other opportunities to measure cross system movement include data linkage/matching studies, collection of prospective survey data from income support recipients, and review of unstructured system information (e.g., case file reviews).



The data landscape is highly fragmented and siloed... There are currently no formal linkage of databases between systems.

Opportunities to Improve Work and Health

Multiple opportunities to improve work and health outcomes were identified. The opportunities to make the greatest impact are in the upstream systems that are temporally closer to the onset of health conditions and exit from work. Interventions at this point can also have positive impacts downstream. For example an intervention that improves the health and well-being of workers while they are in work will reduce the number of workers who become ill and have long periods of work incapacity. This in turn will reduce the flow into the downstream systems and reduce the overall burden of work incapacity in society. However there are also significant opportunities to intervene in the downstream systems.

The opportunities have been grouped into six categories. They include **(1)** potential for greater information and data sharing between systems, both to assist quantification of the movement of people between systems and develop a shared understanding of system rules, practices and processes that have flow-on effects to other systems; **(2)** earlier intervention both within

individual systems and further 'upstream' including primary, secondary and tertiary prevention interventions; **(3)** greater alignment of service models, for instance with respect to purchasing of healthcare, return to work and employment services, and in the development of case management best practice; **(4)** a joint focus on engaging and influencing employers, as they are universally considered critical for prevention of illness and injury, rehabilitation and return to work, as well as supporting re-engagement of people with long-term incapacity in the workforce; **(5)** potential to consider product and benefit design to reduce gaps in support and better encourage return to work; and **(6)** focus on more efficient and effective transitions of people between systems.

A number of interviewees also raised the potential for substantial policy reform, citing examples from other countries of more streamlined national approaches to supporting people with work incapacity. Interviewees also noted this may be a longer-term objective, requiring further development of the evidence base.



Multiple opportunities to improve work and health outcomes were identified.

Conclusion

A very large number of Australians of working age experience periods of temporary or permanent work incapacity due to ill health, disability or injury. The costs of providing income support to these people are substantial. Income support is dispersed across many commonwealth, state, territory and private organisations through ten major systems. Services to assist health and work outcomes may be funded through these systems, through personal resources or through other systems (e.g., Medicare, Private Health Insurance, National Disability Insurance Scheme). While we have a limited understanding of the movement of people between the support systems, there are multiple short-term opportunities to improve knowledge in this area. There are also numerous opportunities to improve work and health outcomes in this population. Many of these require cross-sector collaboration.

Background

The Collaborative Partnership

The Collaborative Partnership to Improve Work Participation (herein referred to as the 'Collaborative Partnership') has recently been established as a consortium of Australian organisations from the private, public and not-for-profit sectors. The founding partners of the Collaborative Partnership include Comcare, the Department of Social Services (DSS), the Department of Employment, the Australian Council of Trade Unions, the Insurance Council of Australia, Employers' Mutual, the Australasian Faculty of Occupational and Environmental Medicine, and the National Mental Health Commission.

The Collaborative Partnership aims to achieve sustainable improvements in working age population health and workplace productivity through improving work participation of people with temporary or permanent physical or mental health conditions which can impact on their ability to work.

The Collaborative Partnership has established work streams in five priority areas. Among these is an initiative to examine the interactions and transfers between systems of work injury and disability support and services in Australia (the Cross-Sector project). The DSS is leading the Cross-Sector project and has commissioned Monash University to conduct the initial component of the Cross-Sector project.

This report describes the approach and findings from this project, conducted over the period September to December 2017.



Work Incapacity in Australia

There is now a substantial body of evidence that employment is a determinant of health, and conversely that poor health is a major contributor to loss of work capacity and unemployment [1]. There is also a growing body of evidence that re-engagement in work after a period of illness or injury can promote recovery [2]. Despite this, work incapacity due to illness, disability and injury remains a significant economic and health burden in Australia and internationally.

Recent estimates suggest, for example, that an estimated 532 thousand workers experienced work-related injury in the 2013/14 financial year, a rate of 43 injuries for every thousand workers [3]. The cost to the economy was \$61.8 billion in 2012/13, or 4.1% of GDP, and three-quarters (74%) of this cost is assumed by the worker [4]. One-third (31%) of injured workers involved in workers' compensation systems who took ten days off work had not achieved sustained Return to Work (RTW) in the seven to nine months following claim submission [5].

These estimates dramatically underestimate the true burden work health related work incapacity in Australia, as they are exclusive of the burden associated with many illnesses, diseases and conditions that do not occur in the course of employment, but that nevertheless affect the ability of people to remain in work. The recent national burden of disease study shows that conditions commonly associated with work incapacity such as back pain, shoulder pain and anxiety account for three of the five major conditions affecting people of working age in Australia [6].

Australia has a complex and fragmented approach to supporting people with illness and injury affecting the ability to work (hereafter referred to as 'work incapacity'). This 'system of systems' consists of multiple state and commonwealth schemes administered variously by public or private sector organisations.

The Australian approach can be broadly divided into **(1)** systems that provide income support during periods of work incapacity; and **(2)** systems that provide services aimed at improving health and work outcomes in people with work incapacity. Our income support systems include publicly and privately administered schemes such as workers' compensation, life insurance, social security, motor vehicle accident compensation, superannuation, defence and veterans' compensation, in addition to leave entitlements provided by employers.

Our systems of healthcare, rehabilitation, employment and disability support intersect with these income support systems, and are also provided through a mix of public and private schemes including Medicare, the Pharmaceutical Benefits Scheme, the National Disability Insurance Scheme, private health insurance, employment services and occupational rehabilitation, as well as services provided by employers.

The various organisations within this landscape share common objectives, which may be summarised as:

- preventing illness and injury affecting work capacity,
- reducing the severity and duration of work incapacity where it occurs,
- improving engagement in good work, and
- minimising the costs of work incapacity to society, workers and employers.

It is clear that no single system, acting in isolation, will fully achieve these objectives at a national level. Effective national action requires co-ordination and collaboration across the systems of income support and service provision.

To date very little attention has been paid to how these systems intersect and interact. The cross-sector project is a first step in establishing an evidence base in this critical area of public health and social policy.

Objective

The project overarching objective is to develop a high-level system map of the current Australian service delivery model for supporting people with a work related injury or disability in their return to work, while concurrently mapping system related data and data gaps.

More specifically, the project seeks to:

- Identify the systems and their associated services.
- Identify data sources to determine numbers of people within different systems, their movement between systems and their access to services
- Identify data sources that can be used to indicate what helps people get into and stay in work; what pushes them out of work and out of systems; and what supports and services are available when they are out of work.
- Consider and document how the services in different sectors and systems interact, or have potential to interact.
- Identify critical points at which people move between systems and the triggers for movement, and
- Provide direction and guidance for where the best opportunities lie for improvements in getting people back to work in order for them to enjoy the health benefits derived from being in employment.

The project maps ten systems, representing the major work incapacity income support schemes in Australia.

The project scope and method are described in the Appendices.

System Map

Australia's income support systems operate within a large and diverse employment and social services landscape. This includes a working age population (15 to 65 years) of 16.2 million people, a labour force (persons employed part or full time) of 12.3 million, and 2.2 million actively trading businesses.

The income support systems for people with work incapacity are variously regulated by state, territory and commonwealth government authorities.

The approach to system governance and benefit delivery varies substantially and is summarised in [Table 1](#) below. A diverse mix of public, for-profit private and not-for-profit entities are involved in case management, administering income support payments and service provision.

Broadly each system can be categorised according to whether they provide national or jurisdictional (state or territory) coverage; whether eligibility is conferred on the basis of the mechanism via which the health condition was acquired (mechanism based systems) or by the presence of an injury, illness or health condition that affects capacity to work, regardless of the mechanism (disability based systems). Systems can also be categorised according to how they are funded, with some being funded by employer payroll, others funded through insurance premiums paid by an employer, a person registering a motor vehicle or through a private or group insurance policy, while the social services system is funded through commonwealth appropriations.

The individual systems vary in complexity from those operated by a single organisation (such as the social security or DVA systems operated by the Commonwealth) through those that involve multiple system operators (such as the MVA compensation systems operated by state and territory government authorities) to the highly devolved system of employer provided leave which is effectively operated through the nation's more than 2 million employers. Each system has a unique set of rules and processes for determining

who is eligible to access income support, the level of support provided, and the duration for which support will be provided. Those systems that provide access to employment, healthcare and other services have an additional set of rules and processes regarding eligibility, access and provision of these services.

The characteristics of people who receive support also varies between the systems. Notably the systems vary substantially with respect to the primary health conditions among benefit recipients and the demographic profile of recipients.

While musculoskeletal and mental health conditions are common, individuals may enter these systems with one of a wide range of health conditions ranging from mild illness resulting in a sick leave day to serious acquired disability with life-long consequences for participation in employment. In the mechanism-based systems people have health conditions related to specific mechanisms of illness and injury. For example, most recipients in MVA compensation schemes have traumatic musculoskeletal injuries, in particular those affecting the spine (e.g., whiplash) and lower extremities (e.g., leg fractures), while the majority of recipients in MVA Catastrophic Injury Schemes have experienced a severe traumatic brain injury (60-70%). Similarly our workers' compensation systems typically accept claims for common work-related conditions such as acute and chronic musculoskeletal disorders, but less frequently accept claims for conditions that may be more difficult to attribute to the conditions of employment, such as cancer or some mental health conditions [\[7\]](#).

The disability-based systems typically support populations with a more diverse range of conditions. For example, data from one life insurer indicated that a quarter of income protection recipients presented with injury or poisoning, and another quarter with musculoskeletal conditions, 15% of recipients had neoplasms (cancers), and 15% had mental health conditions [8].

The demographic profile of people accessing the systems also varies. Approximately 60-70% of workers' compensation recipients are male. Recipients of MVA compensation are also mostly male, but this may be higher in some states. For example, almost 80% of active recipients in the Queensland catastrophic injury scheme (NIISQ) are male (n = 49) [9]. The vast majority of people access the DVA system are male. In contrast, the life insurance and social security systems include approximately even numbers of male and female recipients. Recipients of MVA compensation are more likely to be under 25 years of age than in other systems [10], while the age group with the largest proportion of workers' compensation claims is 35 to 54 years of age. The modal age group for the DSP is 55 to 64 years, for Sickness Allowance and Newstart Allowance 45 to 54 years, and for Youth Allowance 16 to 20 years.

The duration of benefit provision also varies markedly. Employer provided entitlements are usually accessed in cases of temporary illness or personal matters, and a national standard of 10 days sick leave is available to most workers. Short-tail workers' compensation schemes indicate that most claims for time loss last less than one week. One short-tail scheme reported an average of 7 weeks (49 days), but that over a third of all time loss claims last only five days [11]. Long-tail workers' compensation schemes may support recipients until retirement age. DSP recipients tend to remain in the social security system for the greatest duration, with a mean duration of 608 weeks (11.7 years). Newstart Allowance recipients receive benefits for an average 129 weeks (2.5 years), Sickness Allowance 45 weeks (0.9 years), and Youth Allowance 79 weeks (1.5 years) [12]. Life insurance income support is typically time limited to 2 years, while TPD payments are usually provided in a lump sum following a waiting period. Access to MVA lump sum payments may take months to years, whereas access to superannuation lump sum payments for people with terminal illness may be paid in a matter of days.



There is an enormous amount of variation between the systems.

In summary, there is an enormous amount of variation between the systems with respect to their governance, structure, benefit delivery, coverage and eligibility. These differences are reflected in the population of people who receive benefits in each system, and the features of that population such as their health conditions, age and sex profile and the duration over which they experience work incapacity.

This background is important context to the following section on calculating both the number of people receiving income support from each system (the stock) and the movement of people between systems (the flow).

TABLE 1 SUMMARY OF SYSTEM CHARACTERISTICS

System	Type	Coverage	Funding Source	Services Funded	Case Management	Incapacity Duration	Common Health Conditions	Governance
Employer Provided Leave Entitlements	Disability Based	Local / Employer	Employer payroll	Varies by employer	via approx. 2.2 million employers	Days to weeks.	Wide range from common cold through to serious illness and acquired disability.	Minimum standards established in Commonwealth, State and Territory legislation. Specific arrangements defined via employment contracts, enterprise agreements, or awards.
Workers' Compensation (short-tail schemes)	Mechanism Based	Jurisdictional (NSW, VIC, QLD, SA, NT)	Employer premiums	Healthcare, RTW, Functional supports	via 18 public or private sector insurers	Mostly temporary incapacity (days to months). Small proportion of permanent incapacity (years or longer).	Musculoskeletal conditions; Minor trauma; Mental Health Conditions; Fractures.	Regulated by state / territory / commonwealth authorities. In some jurisdictions insurance and case management functions may be privatised.
Workers' Compensation (long-tail schemes)	Mechanism Based	Jurisdictional (TAS, WA, ACT, CTH)	Employer premiums	Healthcare, RTW, Functional supports	via 23 public or private sector insurers			
Motor Vehicle Accident Compensation (lump sum benefit schemes)	Mechanism Based	Jurisdictional (QLD, WA, SA, ACT, NSW until Dec 2017)	Motor Vehicle Registrations	Healthcare (limited)	via 19 private sector insurers	Mostly temporary incapacity (days to months). Small proportion of permanent incapacity (years or longer).	Traumatic Injury including whiplash, fracture, brain injury and spinal cord injury.	Regulated by state / territory authorities. In some jurisdictions insurance and case management functions may be privatised.
Motor Vehicle Accident Compensation (statutory benefit schemes)	Mechanism Based	Jurisdictional (VIC, TAS, NT, NSW from Dec 2017 and all states have serious injury schemes)	Motor Vehicle Registrations	Healthcare, RTW, Functional supports Lifetime care (serious injury schemes)	via 11 public or private sector insurers			

TABLE 1 SUMMARY OF SYSTEM CHARACTERISTICS

System	Type	Coverage	Funding Source	Services Funded	Case Management	Incapacity Duration	Common Health Conditions	Governance
Life Insurance (income protection policies)	Disability Based	National	Private (worker) or Group (superannuation) policies	RTW (limited)	via 29 private sector insurers	Mostly temporary incapacity (months).	Musculoskeletal conditions; Mental Health conditions; Cancer	Regulated by the Australian Prudential Regulatory Authority (APRA) and the Australian Securities and Investments Commission (ASIC), with industry standards set by the Financial Services Council (FSC).
Life Insurance (total and permanent disability policies)	Disability Based	National	Private (worker) or Group (superannuation) policies	RTW (limited)	via 29 private sector insurers	Permanent incapacity. Lump sum payment.		
Social Security	Disability Based	National	Taxation	None	via commonwealth agency (Centrelink)	Typically long term incapacity (multiple years) Sickness Allowance temporary incapacity (months)	Musculoskeletal conditions; Mental Health conditions; Intellectual / Learning Disability; Nervous system disorders; Circulatory system disorders.	The Commonwealth Department of Social Services is the policy agency. Service delivery is via the Commonwealth Department of Human Services.
DVA Comp and Pensions	Mechanism Based and Age Based	National	Taxation	Healthcare, RTW, Functional supports	via the Department of Veterans Affairs	Mix of temporary and permanent incapacity (avg duration 2.2 years)	Musculoskeletal conditions; Minor trauma; Mental Health Conditions; Fractures.	The Department of Veterans Affairs regulates the workers' compensation and veterans pension schemes.
Superannuation Withdrawals	Disability Based	National	Worker (member) contributions	RTW (limited)	via 30 corporate, 41 industry, and 579,000 self-managed superannuation funds	Mainly permanent incapacity. Some temporary incapacity and terminal medical condition.	Terminal medical conditions; Degenerative Disorders; Cancer	Regulated the Australian Taxation Office (ATO) and Australia Prudential Regulation Authority (APRA) under Commonwealth legislation.

Stock

Estimates of the number of people receiving income support from each of the ten systems were constructed for the 2015/16 financial year using publicly available information and in some cases, information not in the public domain but provided to the research team by project participants / interviewees or agencies participating in the Collaborative Partnership.

Our approach to determining the total stock of recipients was first, to determine the number of people meeting the in-scope definition within each system, which can be paraphrased as “the number of people receiving income support payments who were in paid employment at the onset of the health condition that impacts their capacity to work and contributes to their need for income support”. We note that the definition does not indicate that the health condition was the sole or primary cause of work incapacity, but rather that the health condition results in “...a partial or complete incapacity to work”.

To calculate the number of recipients in each system we required two pieces of data, being:

1. The number of people receiving income support from the system in a given time period; and
2. The proportion of those people who were working when they acquired a health condition that affected their work capacity.

We can then multiply these two numbers to arrive at the total stock of recipients. For the three lump sum systems (Life TPD; MVA lump sum; Superannuation Withdrawals) we counted claim finalisation / payment of the lump sum as the indicator of income support receipt. For the remaining systems, all of which have as their primary income support mechanism periodic payments, we counted all new claims receiving an income benefit during the time period.

Second, we then aggregate the data from each of the ten systems to calculate the total number of recipients across the ten systems combined. We selected the 2015/16 financial year as the most recent full year for which data was available across all ten systems. We note that it is possible for a single individual to be in receipt of benefits from multiple systems within a given year. While this is not the norm, this does mean that the number of individuals in receipt of benefits will be lower than the total number of recipients reported.

As noted later in the report, the data available within each system varies substantially in its completeness, accuracy, quality, and relevance for this exercise. Thus it was necessary to make certain assumptions to calculate the stock of recipients for each system. Where assumptions were required we have relied on publicly available reports, and have referenced these where they were used. Where assumptions were required we have taken a conservative approach to ensure that we do not overestimate the stock. Where feasible we have tested these assumptions with system experts to verify our approach and provide assurance that we are not over-inflating estimates.



Data available within each system varies substantially in its completeness, accuracy, quality, and relevance.

In addition to the number of recipients, for each system we have also calculated the total cost of income support provided in the 2015/16 financial year. Similar to the stock measures, cost measures were constructed from a range of sources. In some cases systems report costs more accurately than numbers of recipients, and thus costs were simpler to calculate. In others we estimated costs by working from the number of recipients and applying additional information regarding the typical (or average where it was available) rates of income support. We then combined the total expenditure with the total number of recipients to determine the average annual expenditure per recipient, for each system.

We also calculated the number of recipients expressed as a rate per 1000 Australians of working age (the recipient rate). The recipient rate provides a method of standardising the number of recipients against a common denominator. We selected the total Australian working age population as our denominator as this reflects the total available pool of individuals from which the system recipients are drawn.

Finally, we calculated the minimum and maximum weekly amount of income (net of income taxation) provided under each system, for a person working full-time with national average weekly earnings (AWE) prior to the onset of the health condition leading to work incapacity. This was determined by either applying system rules regarding the percentage of AWE covered, or in the social security and DVA pension systems by accessing current payment rates for the various pensions and allowances. For the three lump sum systems we simply reported the average lump sum payment.

In summary we adopted a bottom up approach to estimating the stock, calculating numbers based on a detailed review of documentation available to the research team. In the following section we describe the outcome of this approach. A more detailed explanation of the calculation for each of the systems is provided in the appendices.



We adopted a bottom up approach to estimating the stock, calculating numbers based on a detailed review of documentation.

STOCK OF RECIPIENTS FOR 2015 / 16

It was estimated that 6.5 million Australian workers accessed employer provided entitlements during the 2015/16 financial year, and that there were a further 786,000 recipients of income support through the remaining systems. The total expenditure on income support was estimated at \$37.2 billion for the 2015/16 financial year.

The number of recipients and total expenditure varied substantially between systems. The largest system by volume of recipients and expenditure was employer provided entitlements. However, the duration of benefit provision in this system is typically of a short term nature. The second largest system by volume and expenditure was social security, with the DSP being the major component of the system. Workers' compensation and Life Insurance systems were the next largest in terms of both volume and expenditure. Other systems were much smaller in magnitude. For example we estimated that there were 5,856 recipients of MVA statutory benefits, and 24,000 active claims for DVA compensation.

The volume of recipients and expenditure are functions of multiple factors, including any limits placed on system access, the amount of income support provided, and the extent and duration of incapacity of people accessing system benefits.

For example, employer provided entitlements are available to most people in the labour force and there are few limits to access. However these entitlements are usually used for temporary illness. Thus there is a very high volume of use but a relatively low expenditure per case at \$2,861. In contrast, access to MVA compensation systems is restricted to people injured in a motor vehicle crash (and in some cases to those not at fault for the crash), and while most people have mild to moderate injuries and recover, some have very serious injuries that result in life-long income support. Thus there is a low volume of cases but a relatively high expenditure per case. Social security has relatively few barriers to access and thus there is a large volume of recipients. The DSP was the largest component of the social security system. The DSP system imposes eligibility criteria such as recipient functional capacity assessments, but this affects the numbers of new rather than active recipients. DSP recipients by definition have limited work capacity and tend to remain in the social security system for long periods of time once they have entered; more than half of all DSP recipients have received the benefit for more than 10 years. Thus there is a large volume of very long-term recipients in this system.



The largest system by volume of recipients and expenditure was employer provided entitlements.

TABLE 2 SYSTEM STOCK AND EXPENDITURE IN 2015 / 16

System	Est. Number of Recipients (000's)	Est. Total Expenditure on Income Support (\$m's)	Est. Average Expenditure per Recipient (\$)	Est. Recipients per 1000 Working Age Population
Employer Provided Entitlements (Sick Leave)	6,544	18,725	2,681	411.6
Workers' Compensation – Short-Tail	126	1,859	24,176	7.9
Workers' Compensation – Long-Tail	30	650	32,395	1.9
MVA Compensation – Statutory Benefits	6	96	52,000	0.4
MVA Compensation – Lump Sum	9	267	110,609	0.7
Life Insurance – Income Protection	65	1,444	22,217	4.6
Life Insurance – TPD	30	2,990	100,634	2.8
Social Security – DSP	282	6,108	21,631	17.7
Social Security – Newstart Allowance	169	2,287	13,536	10.6
Social Security – Youth Allowance	10	102	10,601	0.6
Social Security – Sickness Allowance	8	108	13,974	0.5
DVA Comp and Pensions	24	293	23,982	1.1
Superannuation Withdrawals	27	2,226	82,444	1.7
Total	7,330	37,155	5,069	461
Total (excluding employer entitlements)	786	18,430	23,000	49.4

AMOUNT OF INCOME SUPPORT PROVIDED

The weekly amount of income support provided varied substantially between systems. [Figure 3](#) on page 29 describes the minimum and maximum support for a person who prior to their illness or injury was earning the national average wage of \$1,506 (\$1,179 net of income tax). The highest amount was for employer provided entitlements where people typically receive 100% of their usual wage. The lowest amount was for Youth Allowance where the minimum benefit represents 18.5% of national net AWE or \$219 per week (for a person who is single, no children, 18 years or older and living away from parent's home). People receiving the maximum single DSP payment are earning 34.5% of national net AWE or \$407 per week, prior to addition of any supplements.

The workers compensation, life insurance (income protection), motor vehicle accident (statutory benefit), and DVA compensation systems provide approximately equivalent benefits, with most weekly payments between 75% and 100% of usual earnings for a person earning the national AWE. This equates to a range of \$884 to \$1179 per week. The exception is the ACT workers compensation scheme, which beyond 26 weeks of incapacity provides a benefit of 65% of PIAWE, equating to a payment of \$766 per week for a person previously earning national AWE. Some of these systems apply maximum caps on benefit payments which means the differences between systems become greater for higher income earners, however we have not modelled these.

Flow

Internationally, there are multiple published studies of the flow of people between systems of income support and on interactions between these systems. For example studies in the United States have demonstrated that up to 37% of social security disability recipients were injured at work [13] and that having a workers compensation claim substantially increases the probability of being a disability income support recipient [14].

Literature review identified a paucity of such information in Australia.

Our literature review identified three published analyses that contained some information regarding the movement of benefit recipients from one system to another (the flow). These examples were from the social security, life insurance (TPD) and MVA compensation (statutory benefits) systems, and these are described below. The information contained in these documents, while helpful, provides limited insight into the flow of people between systems.

We were unable to identify any analysis of other system interactions, such as the impact that changes in the boundaries of one system (e.g., restriction or expansion of eligibility) may have on other systems. This lack of documented information and data was confirmed through interviews.

Interviewees were able to make proposals, based on their experience within a given system, of the flow in to that system. For example interviewees from life insurance systems suggested that up to 50% of people making life insurance TPD claims have previously been in contact with a workers compensation or MVA compensation systems during the same period of work incapacity.

Despite the lack of hard data, a number of themes emerged from the interviews that provide insight into the likely flows between systems. These themes provide a basis for future research and analysis (i.e., testable hypotheses), and are summarised in Table 3.

TABLE 3 THEMES ARISING FROM INTERVIEWS

Theme	Explanation
Most people return to work	Most people have temporary periods of incapacity and return to work. It is important to recognise that the major flow is between the 'healthy at work' state and the upstream systems of employer entitlements, workers compensation, motor vehicle compensation and life insurance. That is, for many people the systems function well and support return to paid work. Some systems measure and report return to work rates, but others do not.
Some people will touch multiple systems	Some people with complex health conditions and long periods of incapacity are likely to interact with multiple systems or to never return to paid employment. This is a large group who may take diverse pathways through the 'systems of systems' during their period of incapacity. The longer the period away from work, the less likely these people will ever return to paid employment, and thus the return to work task becomes more difficult as people progress from upstream to downstream systems.
Policy and product design determine flow	The rules regarding eligibility and benefit provision, variously enshrined in legislation, regulation, policy and product design, exert a substantial influence the flow of people through the systems. Some of these rules are hard wired and pre-determine pathways (or parts of pathways) based on features of the person, their illness or injury, employment circumstances and other characteristics. There is opportunity to better define and influence flow through policy change and product design.

TABLE 3 THEMES ARISING FROM INTERVIEWS

Theme	Explanation
Personal circumstances can affect decision making and influence flow	Factors such as the amount of usual income and family circumstances can influence whether a person enters a particular system, and the duration of their income support. For example people with higher incomes are more likely to have retail life insurance policies and may choose to access those policies rather than, or in addition to, capped workers compensation or MVA compensation systems or group life insurance.
There are multiple gaps in coverage	Because each system has been designed in isolation, there are multiple gaps in coverage, where a person with long-term incapacity may not be eligible for income support from most or any of the systems. For example during waiting periods for MVA compensation or life insurance policies. During these periods of time the person will rely on their personal or family resources, or if eligible will enter the social security system. Personal and family resources such as savings and partner income is likely to be a substantial source of income support for people with long periods of incapacity.
People can access multiple systems simultaneously	It is possible for people, under certain circumstances, to access more than one of the income support systems at the same time. Some systems have processes and policy in place to offset benefits received in one system against those in another, however this is not universally the case.
Lack of support during system transition	There appears to be a lack of support for people who are leaving one system and entering another. Paying more attention to people who are reaching the limit of support in one system may provide an opportunity to track them into subsequent support systems, and to provide supports that facilitate the transition.

Analysis of interview data also revealed a set of proposed major flows between systems. These are summarised in the following table, as well as being represented in the system map (Figure 3) and discussed below. Note that this table does not represent the flow to and from healthy working state—just the flows between the systems in scope.

TABLE 4 HYPOTHESISED MAJOR FLOWS BETWEEN SYSTEMS

Number	From	To
1	Employer Provided Entitlements	Workers Compensation
2	Employer Provided Entitlements	Life Insurance (TPD and income protection)
3	Employer Provided Entitlements	Social Security (Newstart Allowance)
4	Workers Compensation	Life Insurance (TPD and income protection)
5	Workers Compensation	Social Security (Newstart Allowance)
6	Life Insurance	Social Security (Newstart Allowance)
7	Social Security (Newstart Allowance)	Social Security (Disability Support Pension)

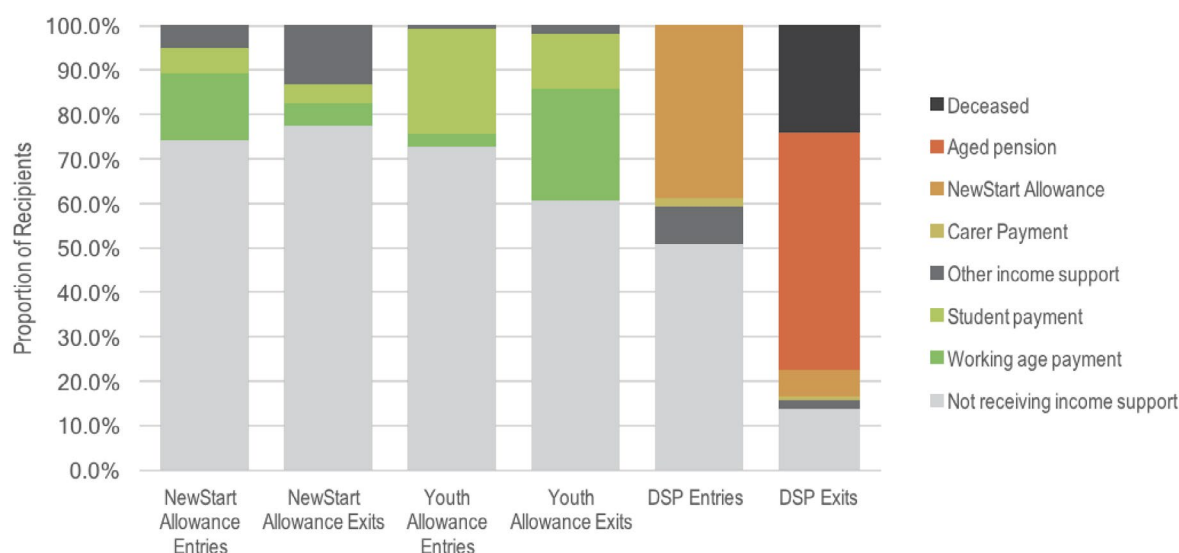
Some of these hypotheses are supported by data in the three published analyses identified in our grey literature search. As part of its Priority Investment Approach to social welfare the DSS appointed PriceWaterhouseCoopers (PWC) to conduct an actuarial evaluation of the Commonwealth social security and income support system. The baseline valuation report provides detailed information regarding the movement of people between commonwealth income support benefits and allowances. It also provides some insight into entries to, and exits from, the social security system.

In [Figure 1](#) below we have reproduced some data from the Baseline valuation report¹ [15] for three of the four social security benefits in scope for this project.

This shows that:

- More than 70% of people accessing Newstart Allowance and Youth Allowance and 50% of people accessing DSP were not previously receiving commonwealth income support.
- Approximately 40% of people accessing DSP were previously receiving Newstart Allowance and a further 10% were receiving another commonwealth income support.
- The major exit from the Newstart Allowance payment was out of the commonwealth income support system (in 75% of cases).
- The major exits from Youth Allowance benefit was out of the commonwealth income support system (in 60% of cases) and to a working age payment (~25% of cases).
- The major exit from the DSP was to the Age Pension (in ~50% of cases) or death (in ~25% of cases).

Figure 1 Circumstances before and after social security benefits



¹ PwC. Valuation Report 30 June 2015 – Baseline Valuation (2016).

A second source of information on the flow between systems comes from the RESTORE study [16] led by the Monash University School of Public Health and Preventive Medicine. This study followed a cohort of Victorians with serious traumatic injury for a period of five years post injury, with telephone interviews conducted at 6, 12, 24, 36, 48 and 60 months post injury. A recent analysis of some interview data examined the sources of income support at four years post injury in people who were working at the time of injury². It is important to note that in Victoria income support through the state MVA compensation system ceases at 3 years for most people.

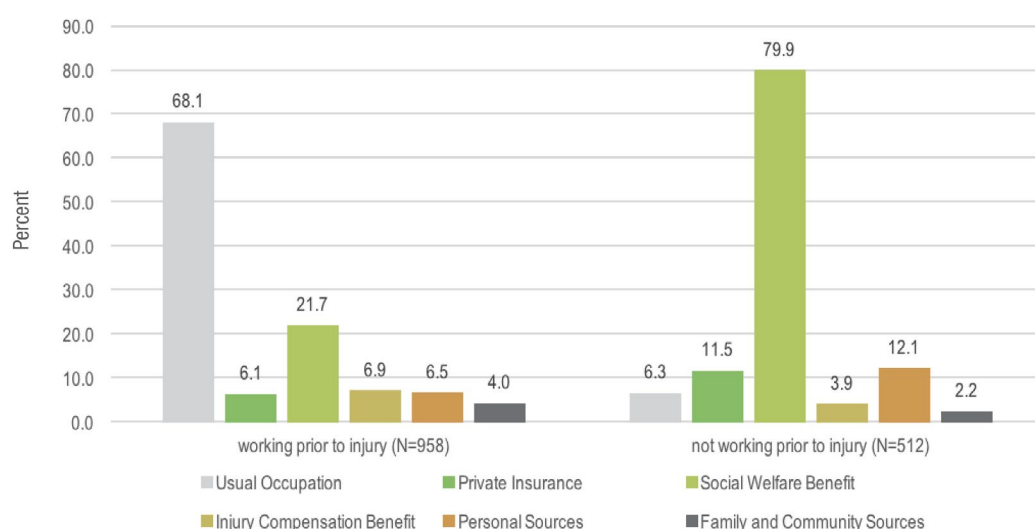
In Figure 2 below we have presented the current income sources at 4 years post injury from 1,470 people, including 958 who were in paid employment at the time of their injury.

These results demonstrate:

- very different patterns of income support depending on employment status at time of injury
- that most people employed at injury have returned to their usual occupation by 4 years post injury
- that slightly more than 1 in 5 people with serious trauma who were employed when injured, are receiving a social security benefit at 4 years post injury; and
- that a range of other sources of income support were apparent including injury compensation system payments, private (life) insurance payments and relying on person and family resources.

Data from this same cohort showed that 45% of the cohort had received income from at least two distinct sources since their injury.

Figure 2 Sources of income support 4 years following major traumatic injury



² Data provided by study investigators.

The final source of information on flow arises from a study by SunSuper and AIA Australia of 330 people who had received TPD payments through the superannuation group insurance system [17].

Participants were interviewed at 3 to 5 years post injury at which point in time:

- 22% had returned to work (majority in full time work)
- 14% were actively seeking employment
- 66% wanted assistance in finding a job
- 69% wanted assistance in retraining and upskilling.

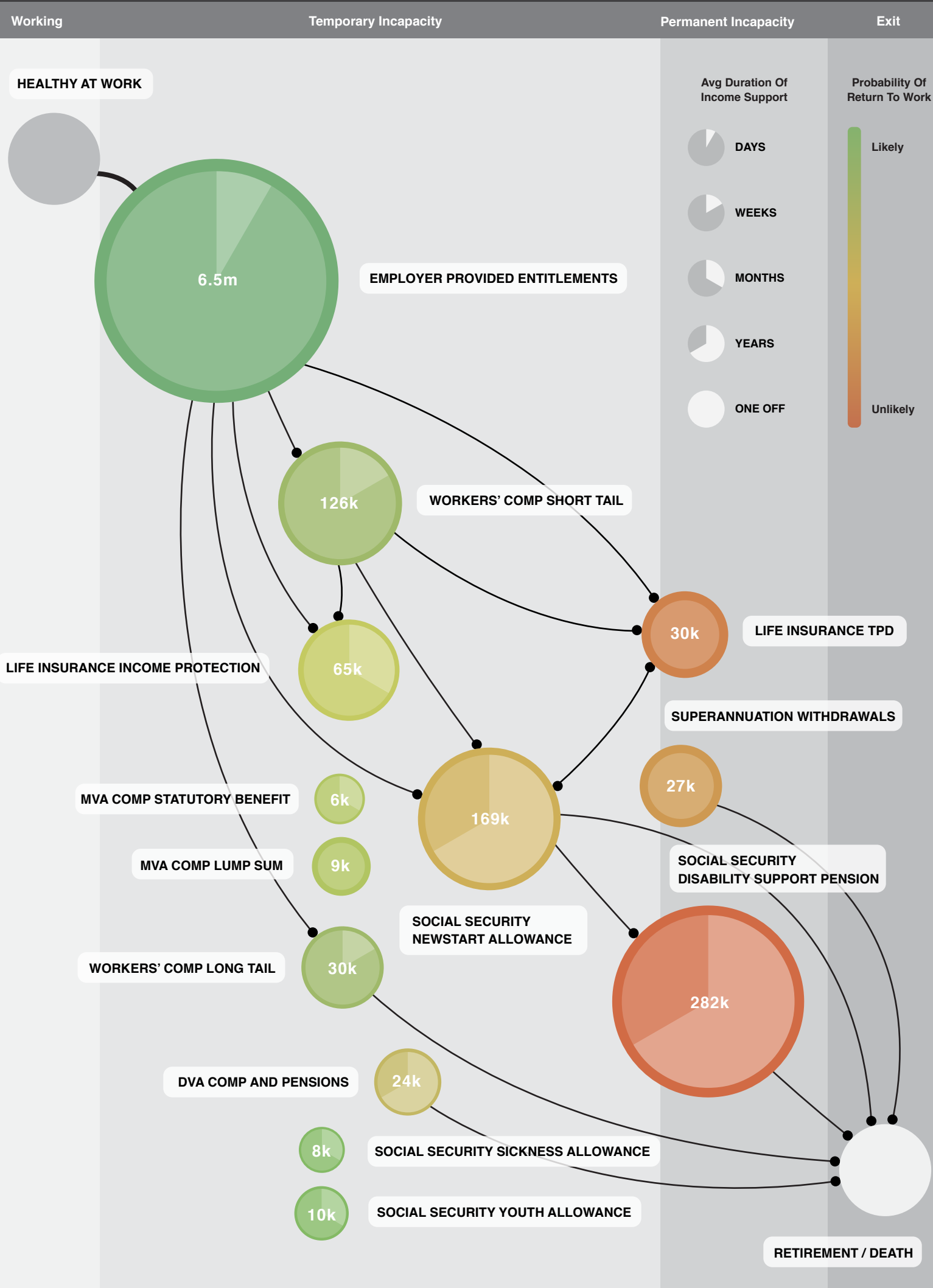
Map

In summary it is possible, with some assumptions, to develop estimates of the number of people receiving income support within each of the systems (the stock). We have limited information regarding the flow of people between systems, but the available information and interviews with experts supports the assertion that there is a substantial movement of people between the income support systems, and provides some insight into the likely major movement pathways. Interviews and document analysis also supports the assertion that the likelihood of returning to work is reduced as the duration of incapacity becomes longer, and thus return to work rates in the downstream systems are likely to be lower than in the upstream systems. Further the duration of benefit provision varies substantially between systems, with people accessing some systems for very short periods of time (days) and others for very long periods of time (years).

The graphic following combines this information into a conceptual map of the income support systems in Australia. The map represents the stock (volume) of recipients as the size of the bubbles, positioned on a scale from healthy at work, through temporary and permanent incapacity, to system exit. The most common exits from the system are returning to work (top left hand side), and retirement, unemployment for reasons other than ill health, and death (bottom right hand side). Some systems are located in the permanent incapacity segment indicating that people in these systems are predominantly those with long-term reduced capacity to work. Others are located in the temporary incapacity segment indicating that the majority of people accessing these systems have short term periods of reduced work capacity. The major hypothesised pathways between systems are indicated by intersecting lines between the bubbles. Some of these flows are unidirectional (one terminal dot) and some are bi-directional (two terminal dots). The colour gradient of green through orange to red indicates the likelihood of returning to work for people in a given system. The inner semi-circles within each bubble indicate the average duration of benefit receipt within each system, on a scale from days through months to multiple years.

Figure 3 System Map

(Full page graphic on page 28 and 29)



Numbers represent estimated income support recipients in 2015—2016

Lines represent proposed major movement between systems

	Recipients	Type	Coverage	System	Recipient	Min (per recipient)	Max
EMPLOYER PROVIDED ENTITLEMENTS Sick leave, annual leave or other leave provided by the employer.	 6,544,000	Disability based	Local / Employer	 \$18,725m	 \$2,681	 \$1,179	 \$1,179
WORKERS' COMP SHORT TAIL Income support and medical to workers injured in the course of employment. Income payments time limited to 5 years.	 126,000	Mechanism based	NSW, VIC, QLD, SA, NT	 \$1,859m	 \$24,176	 \$884	 \$1,179
WORKERS' COMP LONG TAIL Income support and medical services to workers injured in the course of employment. Income payments limited to retirement age.	 30,000	Mechanism based	TAS, WA, ACT, CTH	 \$650m	 \$32,395	 \$766	 \$1,179
MVA COMP LUMP SUM Lump sum payment for economic loss for those injured in a motor vehicle accident that was not their fault.	 9,000	Mechanism based	QLD, WA, SA, ACT, NSW	 \$267m	 \$110,609	Lump sum \$110,609	
MVA COMP STATUTORY BENEFIT Income support and medical services to people injured in a motor vehicle accident. Income payments time limited except for very seriously injured.	 6,000	Mechanism based	VIC, TAS, NT, NSW	 \$96m	 \$52,000	 \$943	 \$1,120
LIFE INSURANCE INCOME PROTECTION Income support to people with a medical condition that results in work incapacity. Payments usually time limited to 2 years.	 65,000	Disability based	National (per issuer)	 \$1,444m	 \$22,217	 \$884	 \$943
LIFE INSURANCE TPD Lump sum payment for economic loss to people with a medical condition that results in permanent incapacity.	 30,000	Disability based	National (per issuer)	 \$2,990m	 \$100,634	Lump sum \$100,634	
SOCIAL SECURITY DISABILITY SUPPORT PENSION Income support for people with a significant physical, intellectual, or psychological condition that limits work capacity to less than 15 hours per week.	 282,000	Disability based	National	 \$6,108m	 \$21,631	 \$407	 \$447
SOCIAL SECURITY NEWSTART ALLOWANCE Income support for unemployed people aged between 25 and 65 years who are looking for work.	 169,000	Disability based	National	 \$2,287m	 \$13,536	 \$269	 \$376
SOCIAL SECURITY YOUTH ALLOWANCE Income support for unemployed people aged less than 24 years who are looking for work or studying.	 10,000	Disability based	National	 \$102m	 \$10,601	 \$219	 \$376
SOCIAL SECURITY SICKNESS ALLOWANCE Income support for workers who temporarily cannot work due to injury, illness, or disability, but have a job to return to. Usually time limited to 12 months.	 8,000	Disability based	National	 \$108m	 \$13,974	 \$269	 \$348
DVA COMP AND PENSIONS Income support and medical services for veterans aged below 60 injured during service, and pension for veterans aged above 60 years.	 24,000	Mechanism and aged based	National	 \$293m	 \$23,982	 \$884	 \$1,179
SUPERANNUATION WITHDRAWALS Access to superannuation prior to retirement age in people with terminal medical conditions, temporary or permanent incapacity.	 27,000	Disability based	Industry / National	 \$2,226m	 \$82,444	Lump sum \$89,500	

Factors Affecting Pathway

As noted above, interviewees reported that policy and product design can determine the flow of people between systems. They provided multiple examples of rules that mean the individual must (or will be more likely to) enter a given system to receive income support. This feedback led us to review system eligibility criteria to determine the factors that affect access to benefits. Our analysis revealed that nine factors effectively determine eligibility or access to specific systems, and thus influence the likely pathways between systems. These factors relate to the person, their illness or injury, employment circumstances and their personal and family circumstances. These are summarised in [Table 5](#).

The most influential of the nine factors is the mechanism of illness or injury. This factor immediately delineates the first systems that an individual may access into three groups; motor vehicle accident related, work-related, or other. Whilst the recipient may access other systems from each of these groups later, the first system that an individual may access is mostly determined by the mechanism of injury.

Recipient jurisdiction and employer also strongly affect the pathway through systems. For example, if the person experiences a work-related injury they are eligible for a short-tail workers' compensation scheme in Victoria, a long-tail workers' compensation scheme in Western Australia, and DVA compensation if they were a veteran.

The nature of the injury or illness is also important. If the person was involved in a motor vehicle accident in Queensland and they are not severely injured, then they may be eligible for a lump sum benefit. However, if they experienced a severe brain injury (i.e., a catastrophic injury), then they may be eligible for life-long statutory benefits under the NISQ. People with manifest conditions (e.g., nursing home-level care requirements) are eligible for immediate acceptance to the DSP, and those with a terminal medical condition are eligible to withdraw their superannuation tax-free.

These factors interact in complicated ways to determine eligibility to access system benefits. In the following section of the report we use case studies to highlight some ways in which these factors may interact to influence a person's pathway through the system.

TABLE 5 FACTORS AFFECTING SYSTEM ACCESS

Factor	Rationale
Jurisdiction	Workers' compensation and MVA compensation systems are geographically based. This means, for example that a person injured in Victoria would be covered by the Victorian workers' compensation system. The only exception to this rule is the Comcare workers' compensation scheme, which covers Commonwealth Government employees and some large national self-insured employers. Other factors in this list identify Comcare benefit recipients.
Mechanism of Injury / Illness	Injuries and illness incurred in a MVA are eligible for MVA compensation system. Those incurred in the course of employment are eligible for workers' compensation.
Employer	Commonwealth Government employees with work injuries will receive benefits from the Comcare scheme, and may also have access to Commonwealth superannuation. Defence force members will receive benefits from DVA compensation until age 60, and pensions afterwards. Sole traders are usually excluded from workers' compensation and thus will need to access other systems of income support.

TABLE 5 FACTORS AFFECTING SYSTEM ACCESS

Factor	Rationale
Nature of Injury / Illness	Catastrophic injury in motor vehicle accidents make recipients eligible for lifetime care schemes in most states and territories. Blindness has special rules regarding eligibility for the DSP, as do manifest conditions (e.g., conditions requiring nursing home level care). Terminal medical conditions can confer eligibility to access superannuation withdrawals.
Partner Status	Partner status can affect eligibility for social security benefits.
Personal Income	Income may determine eligibility to receive certain social security benefits. Also, level of income may make some systems more attractive than others. For example, high income earners may receive greater levels of income support from uncapped income protection policies than from capped workers' compensation schemes.
Family Income	Family income (including partner income) can affect eligibility for social security benefits, and may also impact on whether people need to seek other benefits such as workers' compensation or can be supported by a partner / family members for the duration of disability.
Age	Age affects ability to access superannuation benefit and the amount of superannuation able to be accessed (older people typically have higher superannuation balances). Age also affects eligibility for life insurance and workers' compensation benefits, as most schemes end at retirement age. People aged under 25 also have different eligibility for social security benefits and may be placed on Youth Allowance in the first instance.
Leave Entitlements	The amount of leave an individual employee is able to access affects the duration for which a person can fund their period of incapacity using employer provided entitlements.

Case Studies

The following hypothetical case studies seek to demonstrate the path that an individual may take following the onset of an injury, illness, or disability through the systems of income support. These case studies have been selected to illustrate some of the major pathways through the systems, and to describe how a small set of factors can influence those pathways.

As stated most people experience periods of temporary incapacity and return to paid employment after days, weeks or months. The cases presented here are of people with long periods of work incapacity (i.e., these are 'worst case' scenarios), and should not be considered representative of the entire population of people in scope for the project.

Case 1 – The worker

THE CASE

The worker lives in South Australia, is middle aged, employed full time and earns an average income. Over the course of several months the worker develops chronic disabling back pain that can be attributed to their circumstances of employment. Following a number of intermittent absences, the condition worsens and the worker requires an extended absence from work and significant treatment. Following a total of four years off work the worker retrains and is able to re-enter the workforce in a different role.

THE PATHWAY

The worker accesses sick leave initially, followed by the South Australian workers' compensation system. Benefits in the SA system are limited to two years, after which time the worker applies to for a Disability Support Pension, and for access to a TPD payment through a group life insurance policy. While waiting for the DSP application to be determined and having no other source of family income, the worker receives Newstart Allowance, and then following a waiting and assessment period receives a lump sum TPD payment. This payment precludes the worker from receiving further social security benefits for a number of years.

The worker receives a weekly income of 100% of normal earnings for the first year off work, dropping to 80% of normal earnings during the second year when the workers' compensation income steps down. At the start of year 3 the worker receives 25% of prior weekly income for the period on Newstart Allowance, and then relies on the TPD lump sum for income. The DSP application is not approved due to the lump sum TPD payment.

Throughout the period the worker receives treatment from his GP and a range of physical therapists, as well as surgery and prescription medication. Initially this is funded through Medicare, the PBS and out of pocket expenses (while on sick leave) and then by the workers' compensation system, returning to Medicare and the PBS when the worker enters the social security system and during the life insurance claim. The worker has multiple work capacity and medical assessments, including on entry to the workers comp system, approaching the end of the workers compensation period, and on applying for both the DSP and TPD. A number of occupational health and rehabilitation providers engaged with the worker throughout the period of incapacity, variously appointed by the employer, the workers' compensation scheme and the life insurer.

SOME ALTERNATIVE PATHWAYS

If the worker was employed by the commonwealth government organisation the Comcare long-tail workers compensation may have provided income support, treatment and rehabilitation throughout the period of incapacity.

If the worker was married with a partner on a reasonable income eligibility for social services benefits may have been limited.

If the worker was employed as a sole trader access to workers' compensation would be restricted, likely bringing forward the life insurance application and/or the application for social security.

Case 2—The driver

THE CASE

The driver lives in Queensland, is young, single, employed full time, and earns an average income. Travelling to a community event, the driver is involved in a motor vehicle accident (MVA) that is caused by another motorist. The crash leaves the driver with multiple limb fractures requiring hospitalisation, multiple bouts of surgery and significant course of rehabilitation. While the injuries leave the driver substantial physical disability, they are not considered sufficiently severe to warrant lifetime care under the 'catastrophic' injury compensation scheme. The driver is unable to return to the pre-injury role which was physically demanding.

THE PATHWAY

In the immediate aftermath of the crash, the driver accesses their sick leave and annual leave. During this time the driver lodges a compensation claim with the Queensland lump sum MVA compensation scheme. While waiting for the compensation claim to be determined, the driver's employer provided leave entitlements run out, and they are left with no income. The driver approaches Centrelink to apply for a Newstart Allowance, and the application is accepted. This reduces the driver's income to 23% of their pre-injury weekly earnings, and places significant financial stress on ability to meet financial commitments for housing and other daily needs. To reduce costs the driver cancels private health insurance cover. While initial medical care is funded by the MVA compensation system through a lump sum payment, the substantial longer term healthcare and treatment needs are met through the public healthcare system. After receiving the Newstart Allowance allowance for six months, the driver is accepted onto the Disability Support Pension and income increases to 40% of pre-injury weekly wage. After 18 months the driver's MVA compensation claim is finalised and a sizeable lump sum benefit for past and future economic loss, and non-economic loss is paid. This lump sum excludes the driver from continued financial support from Centrelink and so the DSP payment ceases. During this period the driver undergoes multiple medical assessments conducted by doctors contracted to the MVA compensation system insurer and to Centrelink.

SOME ALTERNATIVE PATHWAYS

If the MVA occurred in a state with a statutory benefit scheme (such as Victoria or Tasmania) then the driver would likely have had access to periodic (fortnightly) income support payments from early after injury. This would have removed the need (and access to) Centrelink benefits and delivered a higher weekly payment. In this case reasonable healthcare and treatment expenses would also be covered by the statutory benefits compensation system.

If the motor vehicle crash had resulted in catastrophic injuries (e.g., severe traumatic brain injury) the driver may have been eligible for life time care and support through the recently introduced QIIS.

If the driver had caused the accident (i.e., been at fault), they would not be able to access the Queensland MVA compensation system.

Case 3—Single person

THE CASE

The person lives alone, earns an average income, works full time and lives in Victoria. This person has experienced mental health issues intermittently for many years, but more recently has experienced a significant bout of depression that has affected ability to work. The person has a long employment history and has worked for the same employer for many years. However following a series of long absences from work, the person loses their job and becomes unemployed.

THE PATHWAY

Due to their long history of employment with the same employer, the single person has accrued substantial sick leave and also has unused annual leave. During the initial periods of illness, the person accesses these leave benefits while seeking treatment for the illness. After a number of months the leave entitlements are expended. The person's employer approves a period of unpaid leave.

The person's superannuation fund provides a group life insurance policy, however following medical assessment the person is considered to have work capacity and thus is ineligible to access the total and permanent disablement payment. While serving the waiting period for access to their life insurance the person applied to Centrelink to receive the NewStart Allowance, reducing their income to less than \$300 per week. With this reduction in income the person begins drawing down savings to meet financial commitments such as rent. Access to psychological and pharmaceutical treatment is provided through Medicare and the Pharmaceutical Benefits Scheme, and out of pocket expenditure.

After a prolonged period of illness the person loses contact with the employer. As they are receiving the NewStart Allowance they are required to participate in job finding, which they find very challenging due to the nature of the illness. The treating GP suggests they apply for a DSP, which is approved following capacity assessment.

SOME ALTERNATIVE PATHWAYS

If the person had a working partner they may have greater personal financial resources to support them during the period of incapacity. However this may have limited eligibility for Centrelink benefits.

If the mental illness was incurred in the course of employment (i.e., due to work) the person may have been able to access workers' compensation benefits.

Service Delivery








































































The project scope included investigation of five categories of services; return to work services, healthcare and treatment, job finding or employment services, functional support services and case management services.

Table 6 summarises whether each of these services are usually funded in each of the systems.

There is a wide variation in both the type of services funded and the models of service delivery. Case management was the only service provided across all systems, but approaches to case management varied widely. Workers’ compensation, DVA compensation and MVA compensation (statutory benefits schemes) were the only systems to fund all services.

The tables on following pages provide further information regarding the service delivery models within the systems.

TABLE 6 SUMMARY OF SERVICE PROVISION ACROSS SYSTEMS
(Full page graphic on page 36)

Services and Features	Return To Work	Healthcare / Treatment	Employment	Functional Supports	Case Management
					
	Support for returning to the same job or workplace.	Medical care provided by a healthcare practitioner.	Support for finding a new job or new employer.	Aids and equipment to support daily living.	Coordination of services, supports and funding.
EMPLOYER PROVIDED ENTITLEMENTS					
WORKERS' COMP SHORT TAIL					
WORKERS' COMP LONG TAIL					
MVA COMP LUMP SUM					
MVA COMP STATUTORY BENEFIT					
LIFE INSURANCE INCOME PROTECTION					
LIFE INSURANCE TPD					
SOCIAL SECURITY DISABILITY SUPPORT PENSION					
SOCIAL SECURITY NEWSTART ALLOWANCE					
SOCIAL SECURITY YOUTH ALLOWANCE					
SOCIAL SECURITY SICKNESS ALLOWANCE					
DVA COMP AND PENSIONS					
SUPERANNUATION WITHDRAWALS					

Return to Work Services

Six of the systems included in this report offer return to work services. The most structured and widely delivered services are provided by employers and workers' compensation schemes (both short and long tail). Return to work obligations are mandatory in workers compensation systems and thus use of return to work services is commonplace. In other systems however, return to work services may not be mandatory, or may not be accessed as widely. Services may be provided within the employer (e.g., by human resources department) or by a third party such as an occupational rehabilitation or occupational health provider.

TABLE 7 RETURN TO WORK SERVICES

System	Usually funded?	Service Delivery Model
Employer Provided Entitlements	Yes	Very short term absence typically managed by employee line manager. Support for longer term absences may be provided via in-house human resources or occupational health and safety staff, outsourced to third party provider, or via a combination of in-house and outsourced service providers. Company characteristics (e.g. number of employees, industry) may influence the capacity and delivery of return to work services.
Workers' Compensation (Short-tail)	Yes	Available to workers with accepted time loss claims via the insurance case management function. In addition some workers with specific needs (such as longer-term claims or workers with complex health conditions) may be provided with additional service by third party occupational rehabilitation providers contracted to the insurer, regulator or employer.
Workers' Compensation (Long-tail)	Yes	Available to workers with accepted time loss claims via the insurance case management function. In addition some workers with specific needs (such as longer-term claims or workers with complex health conditions) may be provided with additional service by third party occupational rehabilitation providers contracted to the insurer, regulator or employer.
MVA Compensation (Lump sum)	No	Not usually provided.
MVA Compensation (Statutory benefits)	Yes	May be provided to recipients who were employed prior to their injury and who are likely to have capacity to return to work. May be provided through the insurance case management function or outsourced to a third party provider.
Life Insurance (TPD)	No	Not usually provided.
Life Insurance (Income protection)	Yes	Some insurers provide return to work services, including vocational rehabilitation, to claimants. May be provided through the insurance case management function or outsourced to a third party provider.
Social Security	No	Not usually provided.
DVA Compensation and Pensions	Yes	DVA outsource return to work services to a rehabilitation provider. The Veterans' Employment Assistance Initiative aims to improve rehabilitation and provide employment opportunities. It includes vocational rehabilitation and alignment of recipient skills with job requirements.
Superannuation Withdrawals	No	Not usually provided.

Healthcare and Treatment

Four of the ten systems routinely fund healthcare and treatment. In other systems people may be provided with limited funding or rely on the public healthcare system or any private health insurance cover. Systems where a lump sum benefit payment is offered typically do not pay for healthcare and treatment services, however lump sum MVA compensation schemes may offer an initial payment for medical services until fault is determined. Life insurance is unique in that it is restricted from funding services that health insurers or Medicare already fund.

TABLE 8 HEALTHCARE AND TREATMENT SERVICES

System	Usually funded?	Service Delivery Model
Employer Provided Entitlements	No	Most employees will access healthcare and treatment through Medicare, the PBS and/or private health insurance. Some employers may provide healthcare and treatment direct to employees, though this is not the norm. Many large employers provide access to Employee Assistance Programs (EAP) for preventative healthcare but this is not common for treatment.
Workers' Compensation (Short-tail)	Yes	Services can be accessed through public or private healthcare systems. Workers typically have a choice of healthcare provider; however, insurers have decision making authority regarding whether a particular service will be funded by the scheme.
Workers' Compensation (Long-tail)	Yes	Services can be accessed through public or private healthcare systems. Workers typically have a choice of healthcare provider; however, insurers have decision making authority regarding whether a particular service will be funded by the scheme.
MVA Compensation (Lump sum)	Some	Healthcare and treatment can be paid for initially in some jurisdictions using a Medical Accident Notification Form. This provides the recipient with \$5,000–\$10,000 as an early-up-front payment for medical services.
MVA Compensation (Statutory benefits)	Yes	Services for recipients of statutory benefits are provided where the care is 'reasonable and necessary'. Recipients have a choice of healthcare and treatment providers, but the regulator/insurer has authority of what can and cannot be paid for.
Life Insurance (TPD)	No	Life insurers cannot pay for any item or service that health insurance or Medicare would normally pay for. Life insurers can pay for other services such as exercise physiologists, psychologists, and general wellness programs.
Life Insurance (Income protection)	No	Life insurers cannot pay for any item or service that health insurance or Medicare would normally pay for. Life insurers can pay for other services such as exercise physiologists, psychologists, and general wellness programs.
Social Security	No	People must access healthcare and treatment through Medicare, the PBS or their private health insurance.
DVA Compensation and Pensions	Yes	Recipients with a Gold Card may access any treatment for any health condition for life through public or private healthcare systems. Recipients with a White Card can access treatment for compensable conditions through public or private healthcare systems.
Superannuation Withdrawals	No	People must access healthcare and treatment through Medicare, the PBS or their private health insurance.

Job Finding / Employment Services

People with long periods of incapacity may find themselves permanently detached from their employer (i.e., unemployed). While there are legislative protections in place within most workers' compensation systems that require employers to re-employ injured people for up to twelve months, such protections do not exist in other systems, meaning that employers may choose to terminate employment within reasonable grounds as per the Fair Work Act. Six of the included systems offered job finding or employment services. These were limited to workers' compensation schemes and social security. Social security schemes often require recipients to engage with new employer services to continue to receive benefits (e.g., Newstart Allowance). However, some social security benefit recipients may be exempted from participating in new employer services on disability or incapacity grounds.

TABLE 9 JOB FINDING / EMPLOYMENT SERVICES

System	Usually Funded?	Service Delivery Model
Employer Provided Entitlements	No	Not usually provided.
Workers' Compensation (Short-tail)	Yes	Job finding services may be provided to workers with long-term claims where their pre-injury employers' obligation to accommodate the worker has expired, or in people with complex claims where re-engagement in the workplace at which the injury/illness occurred is unlikely. Service provision is typically outsourced to a third party provider, supported by insurance case management function.
Workers' Compensation (Long-tail)	Yes	Job finding services may be provided to workers with long-term claims where their pre-injury employers' obligation to accommodate the worker has expired, or in people with complex claims where re-engagement in the workplace at which the injury/illness occurred is unlikely. Service provision is typically outsourced to a third party provider, supported by insurance case management function.
MVA Compensation (Lump sum)	No	Not usually provided.
MVA Compensation (Statutory benefits)	Yes	Job finding services may be provided to people with long-term claims and work capacity. Service provision is typically outsourced to a third party provider, supported by insurance case management function.
Life Insurance (TPD)	No	Not usually provided.
Life Insurance (Income protection)	Yes	Some insurers provide access to employment services to claimants. May be provided through the insurance case management function or outsourced to a third party provider.
Social Security	Yes	There is often an obligation on benefit recipients to engage with Disability Employment Services providers, Job Active, Australian Disability Enterprises, and Community Development Programs in order to receive benefits. These services are typically outsourced to third party providers contracted to the Commonwealth.
DVA Compensation and Pensions	Yes	The Veterans' Employment Assistance Initiative aims to improve rehabilitation and provide employment opportunities. It includes vocational rehabilitation and alignment of recipient skills with job requirements.
Superannuation Withdrawals	No	Not usually provided.

Functional Supports

Four of the included systems funded or provided access to disability-related functional supports such as aids and equipment, home and vehicle modifications. These systems typically require that the functional support must achieve a specific goal for the recipient. For example, statutory benefit MVA compensation schemes typically require the functional support to enable a recipient to return to work or provide another specifically measurable benefit. Most systems do not automatically offer functional support services, and recipients are usually assessed for their need for a functional support on a case-by-case basis.

TABLE 10 FUNCTIONAL SUPPORTS

System	Usually Funded?	Service Delivery Model
Employer Provided Entitlements	No	Not usually provided.
Workers' Compensation (Short-tail)	Yes	Functional supports such as home modifications, assistance in the home, or the provision of equipment may be provided to some workers on a case-by-case basis, where the support is 'reasonable and necessary'. Service provision are typically outsourced to third party providers.
Workers' Compensation (Long-tail)	Yes	Functional supports such as home modifications, assistance in the home, or the provision of equipment may also be provided to some workers in a case-by-case basis, where the support is 'reasonable and necessary'. Service provision is typically outsourced to third party providers.
MVA Compensation (Lump sum)	No	Not usually provided
MVA Compensation (Statutory benefits)	Yes	Functional supports can be funded by MVA compensation statutory benefit schemes where the functional support is 'reasonable and necessary'. Service provision are typically outsourced to third party providers.
Life Insurance (TPD)	No	Not usually provided. Life insurers cannot pay for any item or service that health insurance or Medicare would normally fund. However supports that enable return to work may be able to be funded.
Life Insurance (Income protection)	No	Not usually provided. Life insurers cannot pay for any item or service that health insurance or Medicare would normally fund. However supports that enable return to work may be able to be funded.
Social Security	No	Not usually provided. Access to function support for people with serious disability is provided through the National Disability Insurance Scheme. Many DSP recipients will be eligible to access the NDIS.
DVA Compensation and Pensions	Yes	Functional supports may be purchased using the Gold Card or White Cards. The equipment must be related to the condition if the recipient uses a White Card. Service provision is typically outsourced to third party providers.
Superannuation Withdrawals	No	Not usually provided.

Case Management

Case management refers to the coordination and/or management of the benefit/claim process, including assessment, eligibility determination, and benefit and service delivery and termination. All included systems had some form of case management. Approaches vary markedly, with case management provided by employers, regulators, private insurers, superannuation funds and third party organisations. The responsibilities, obligations, resources and capabilities of case managers varies widely between and within the systems. Each of these entities may be responsible a single, or multiple, case management functions.

TABLE 11 CASE MANAGEMENT

System	Usually provided?	Service Delivery Model
Employer Provided Entitlements	Yes	Typically performed by the employees line manager (in cases of short term incapacity) or with the support of organisational human resources department (in cases of longer term incapacity or more complex cases). Organisational characteristics (e.g. size, industry) may influence the capacity and delivery of case management services.
Workers' Compensation (Short-tail)	Yes	Provided by private sector insurers contracted to the regulator in all short-tail schemes. This is provided to all eligible workers with accepted claims. Models vary markedly between insurers. Regulators incentivise insurers to achieve certain performance targets.
Workers' Compensation (Long-tail)	Yes	Provided by private sector insurers contracted to the regulator, or by the regulator directly. This is provided to eligible workers with accepted claims. Case management models vary markedly between insurers. Regulators incentivise insurers to achieve certain performance targets.
MVA Compensation (Lump sum)	Yes	Provided by private sector insurers and regulatory authorities (WA) in lump sum benefit schemes. Case management models vary markedly between insurers.
MVA Compensation (Statutory benefits)	Yes	Provided by the regulatory authority in Victoria and Tasmania, and by a private sector insurer in the Northern Territory. Case management of catastrophic injury statutory benefits is typically provided by a government entity. Case management models vary markedly between insurers.
Life Insurance (TPD)	Yes	Case management may be performed by the insurer, or both insurer and superannuation fund in the case of group policies. The Life Insurance sector has an Insurance Code of Practice to guide case management practice.
Life Insurance (Income protection)	Yes	Case management may be performed by the insurer, or both insurer and superannuation fund in the case of group policies. The Life Insurance sector has an Insurance Code of Practice to guide case management practice.
Social Security	Yes	Claims management services are provided by a single government authority (Centrelink), some functions (e.g., telephone intake) may be outsourced to private sector providers.
DVA Compensation and Pensions	Yes	Case management and claims handling are conducted internally by the DVA.
Superannuation Withdrawals	Yes	Provided by each superannuation fund. The superannuation fund is responsible for assessment, claims handling, eligibility determination, and benefit delivery. Funds must adhere to the legislated conditions of release for early superannuation withdrawals, and the Australian Taxation Office is also often involved in applying tax to any withdrawal.

Data Sources

The scope of data and data gaps to be included in the report was agreed in the first phase of the project with the DSS. In-scope are structured datasets captured in an electronic database where the data custodian (organisation with ‘ownership’ of the data) operates within one of the ten income support system or provides an in-scope service. Also in scope is structured data captured in an electronic database that may facilitate an understanding of movement of people between systems. Such structured data is one of multiple information sources within the income support systems ([Table 12](#)). There is likely to be substantial value in examining other sources of information such as unstructured data. While this was beyond the scope of this project we have commented on potential for future data analysis using unstructured and other data sources in the opportunities section.

TABLE 12 MAJOR SOURCES OF INFORMATION WITHIN INCOME SUPPORT SYSTEMS

Information Type	Description / Example	Notes
Structured Data	Information captured in digital case database/s using structured fields and coding systems.	The basis for the vast majority of data analysis in the income support systems. Usually limited to data required for managing the case and thus significant gaps (e.g., lack of data on co-morbid conditions or psychosocial circumstances).
Unstructured (digital)	Information captured in electronic case files but not converted to a structured format. For example information in medical reports and case notes appended to a case file.	Information can be extracted using some modern analysis techniques such as text mining. Potential to fill some gaps in structured datasets (e.g., medical case notes often contain greater detail on comorbid conditions).
Unstructured (hard copy)	Information captured in hard copy and not converted to electronic format.	Digitisation or physical review of the hard copy is required to extract useable data. Hard copy data is less common but there are still some legacy systems with substantial information in this format.
Tacit	Information known to case managers (e.g., through conversation with worker) but not captured in either structured or unstructured formats.	Often very important for individual case decision making but likely to be highly variable between case managers and workers.
Not captured	Information that is not known to the case management organisation, but that may be relevant for determining the likely claim outcome or service needs.	Likely to include important psychosocial factors but also likely to vary between workers.

Overview

All of the systems have structured datasets in some form. Whenever someone makes a claim or applies to receive a benefit, a case manager or intake officer documents the person's details and the reason they are seeking a benefit. This is almost always coded and entered into an electronic dataset that we refer to as structured data. The information collected in these datasets is usually limited to that required to administer the claim or benefit, and to make decisions on access to benefits and services during the course of a claim.

Data is variously collected and entered by employers, insurers, regulators and system administrators. Most systems collate some of the structured data centrally, although the content and extent of these centralised databases varies considerably. Overall, the data landscape can be categorised as highly fragmented and siloed, with some 'system-specific' centralisation but no formal linkages between systems (Table 13).

TABLE 13 OVERVIEW OF STRUCTURED DATA SOURCES

System	Data Custodian/s	Format	Centrally Collated	System wide data Standards	System wide reporting	Notes
Employer Provided Entitlements	2.2 million employers	Various	No	No	No	There is no centrally collected national source of leave data. Data recording practices vary substantially between employers. Some employers have structured digital databases.
Workers' Compensation (Short-tail)	6 regulators	Structured, Digital	Yes	Some	Annual	Each regulator has a scheme specific database. Content varies between regulators. Some state schemes provide access to detailed data.
Workers' Compensation (Long-tail)	3 regulators	Structured, Digital	Yes	Some	Annual	A de-identified (non-linkable) minimum dataset is compiled by SafeWork Australia, updated annually, and used for national reporting. This is available to external parties.
MVA Compensation (Lump sum)	5 regulators	Structured, Digital	No	No	No	Each regulator has a scheme specific database. Content varies between regulators. Datasets contain information that can enable linkage.
MVA Compensation (Statutory benefit)	8 regulators	Structured, Digital	No	No	No	Each regulator has a scheme specific database. Content varies between regulators. Datasets contain information that can enable linkage.

TABLE 13 OVERVIEW OF STRUCTURED DATA SOURCES

System	Data Custodian/s	Format	Centrally Collated	System wide data Standards	System wide reporting	Notes
Life Insurance (Income protection)	29 insurance Companies	Structured, Digital	Yes	Some	Quarterly	Each insurance company has a company specific database/s. Datasets contain information that can enable linkage at a case level.
Life Insurance (TPD)	29 insurance Companies	Structured, Digital	Yes	Some	Quarterly	APRA requires quarterly minimum transfer of aggregated summary data.
Social Security	Dept of Human Services	Structured, Digital	Yes	Yes	Various	Detailed system database is maintained by DHS. Some data is provided to AIHW / Sax Institute and available to external parties on request. In near future DHS data will be linkable to other Commonwealth datasets.
DVA Compensation and Pensions	Dept of Veterans Affairs	Structured, Digital	Yes	Some	Various	Regulator has a scheme specific database. Contains information that can be used for linkage.
Superannuation Withdrawals	30 corporate, 41 industry, 579,000 self-managed superannuation Funds	Structured, Digital	Yes	Some	Quarterly	Each superannuation fund has a fund specific database. Content varies between funds. Summary, aggregated data provided to system regulator.

To be valuable data needs to be [18]:

- **Reliable and reproducible:** Data that is not reliable will produce different estimates across time periods when no true changes have occurred.
- **Accurate and Complete:** Data should capture all relevant cases, and have sufficient detail to enable trustworthy conclusions to be drawn.
- **Acceptable:** Data should produce output (analysis, reports etc) that is viewed by end-users as understandable, credible, useful and actionable.
- **Accessible:** Able to be accessed by those who need it, when it is needed and in a form that can be used.
- **Sensitive:** Data should be able to detect true changes when they occur.

Some of the individual systems reviewed have databases that address all of these objectives in some way, however all have some limitations and gaps. In the following section we describe the major gaps in data across the 'system of systems'. Further information on datasets reviewed are included in [Appendix 3](#).

Gaps

Some of the systems have been under recent scrutiny with respect to their lack of consistent, quality data. For example the recent ASIC review of the life insurance claims handling [\[19\]](#) noted that limitations can mean that:

- “It is difficult to compare and assess declined claim rates and other key measures of claims performance across insurers”
- “It is more difficult for insurers, including boards and senior management, to assess the performance of their own claims handling and claims outcomes”
- “It is very difficult for consumers and other stakeholders to assess the claims outcomes and performance of the life insurance sector, including trends over time, undermining insurer accountability and consumer trust”

There are also substantial gaps in data capture, standardisation and reporting in some of the other systems reviewed. The major gaps related to lack of centralisation (in some systems), lack of consistent data standard between systems and within some systems, limited analysis and reporting on data at a system wide level (for some systems) and failure to capture information that can support systems improvements.



There are substantial gaps in data capture, standardisation and reporting.

CENTRALISATION

While some of the systems reviewed have well organised and centralised databases with complete or near complete capture of cases within that system (e.g., social security), other systems had limited or highly fragmented data systems dispersed across multiple organisations, and with no consistent data standards (e.g., employer provided entitlements).

Data is variously collected and entered by employers, insurers, regulators and system administrators. Within the workers' compensation and motor vehicle compensation systems, the main source of data are administrative claims databases. These data are collected by insurers and then collated and held by individual scheme regulators. This leads to multiple data 'silos' within systems. The data reporting standards imposed on insurers by the scheme regulators varies between systems, meaning that while some insurers operating across multiple jurisdictions have multi-state coverage, they have neither complete capture (being one of multiple insurers operating in a given jurisdiction) nor consistent data between jurisdictions.

A similar situation occurs in Life Insurance and Superannuation systems, with databases held by the individual insurance companies and superannuation funds. Each organisation develops its own database. In these cases a limited set of de-identified and aggregated summary information is provided on a routine basis to the system regulator (APRA) but identifiable, case level data remains at the level of the insurer or superannuation fund.

Systems that contain centralised datasets collect varying levels of detail (Table 13). All worker's compensation schemes provide detailed data to SafeWork Australia annually in the National Database of Compensation Based Statistics (NDS). This dataset contains numerous variables attached to de-identified benefit recipients at a case level, permitting analyses by both SafeWork Australia and academic researchers. Other systems contain less detailed information. For example, data regarding superannuation withdrawals, collected by APRA, includes aggregated information on the number and cost of withdrawals due to each condition of release. These statistics allow basic analysis only.

The social security system has recently established a significant set of centralised databases, and has used this for detailed actuarial analysis of the various benefits within the system, including movement between benefits. The Department of Social Services now makes some of this data available at a case level to the research community via the Sax Institute (refer to Appendices for further information).

As a general rule, the more organisations involved in administering a given system, the more fragmented the data. The size of the organisation also affects the investment in data resources.



The social security system has recently established a significant set of centralised databases.

STANDARDISATION

Data standards are documented agreements on representation, format, definition, structuring, tagging, transmission, manipulation, use, and management of data. Data standards are a very important part of improving data quality to assist analysis and decision making. Application of data standards can help to ensure consistency of data capture between organisations within a given system, and consistency across time. These are critical elements to ensuring that data is accurate, complete, reliable and reproducible.

Some systems have developed and implemented system-wide data standards. For example the workers' compensation systems have adopted the routine use of standardised coding systems including the Type of Occurrence Classification System (TOOCS) [20] to capture the nature of injury/illness, mechanism and body regions affected. These systems also use as standard the Australian New Zealand Standard Industry Classification (ANZSIC) and the Australian New

Zealand Standard Classification of Occupation (ANZSCO). This has enabled inter-jurisdictional analyses and reporting such as that conducted routinely by SafeWork Australia. Standards for reporting of financial information apply to Life insurers and Superannuation funds, which are required to submit data to APRA under the Financial Sector (Collection of Data) Act 2001. The data is defined in the set of reporting forms and instructions [21, 22], and this has also enabled system wide reporting and analysis.

However, there are no data standards that are applied across systems. Further, there are currently no agreed system wide definitions of important concepts such as “what constitutes an episode of income support?” and “what can be considered an accepted case/claim?” Compounding the lack of standards is a diverse and system specific use of language. For example terms for a person receiving income support include worker, claimant, case, recipient, employee and injured person.



Data standards can help to ensure consistency of data capture between organisations within a given system, and consistency across time.

ANALYSIS AND REPORTING

Analysing and reporting on data is important to make data more accessible and acceptable. At present, most system level data are inaccessible, even to people working within the system. Access is impeded by lack of centralisation to enable system level analysis and reporting (see above), use of highly technical and system specific definitions (in those that have data standards and definitions), lack of availability and in some cases lack of analytical capacity.

Those systems with centralised data sources all have some routine reporting. This ranges from the recent detailed Baseline Valuation Report on the social security system, through quarterly life

insurance financial statistics, to the annual summary of statistical information provided by SafeWork Australia on behalf of the nation's workers compensation systems.

Two systems have also established approaches to make data available to external parties (usually academic researchers) to enable analysis and reporting. This includes the social security Priority Investment Approach (PIA) database and the National Dataset of Workers' Compensation Statistics. Individual organisation within systems may also provide access to data on request [23], however this does not appear to be common.

INCOMPLETE DATA

Data completeness refers to whether or not all the data necessary to meet current and future information requirements are available in the data resource. Complete data is important to ensure data is credible and acceptable, and that it can be used for a range of purposes.

While some of the structured datasets reviewed for this project contained a substantial amount of information, none could be considered complete. The major issue with all datasets is that they are typically limited to the information needed to administer the benefit claim. This means that other information that may be valuable to support insights about the broader range of personal and social factors that lead people to enter or exit a system, or can help to determine the duration, nature or extent of benefit and service provision required.

Typically all of the structured datasets lack robust information on the person's social and psychological circumstances. Another gap in most datasets is limited information on the person's health (such as information about comorbid health conditions or illness secondary to the reason for making a claim) and working circumstances (such as tenure with employer, relationships within the workplace).



Another gap in most datasets is limited information on the person's health and working circumstances.

Data Linkage

A more valuable picture of system function and outcomes for people with work incapacity can be created by linking data. Linking structured datasets can create more comprehensive information at a population, cohort or individual level. To our knowledge there have as yet been no studies that have sought to link data between systems.

Lack of data linkage means that it is difficult for regulatory authorities, organisations and government to monitor trends or assess responses to policy or practice changes. Movement between systems could hypothetically be assessed by linking data sources. Some data sources appear to be linked with other data within specific jurisdictions; projects such as the Western Australia Database Linkage (WADL) have linked data sources from local government with MVA compensation, and the Multi-Agency Data Integration Project (MADIP) and Priority Investment Approach (PIA) dataset combine national demographic data with government payment and Medicare payment data.

Linking data sources between systems may pose a number of significant challenges, primarily due to inconsistent variables and recipient identifiers. Furthermore, some datasets such as the NDS

include no identifiers. This could be overcome using probabilistic matching, and by using data from individual workers' compensation jurisdictions in the case of the NDS. Privacy concerns may also limit linkage between data sources, even with de-identified recipients.

Despite this, there is significant potential for data linkage studies. It would be feasible, for example through the Australian Institute of Health and Welfare data linkage service, to link system level data to Commonwealth Medicare Benefits Schedule data, Pharmaceutical Benefits Schedule (PBS) data, or to link data from a state workers compensation or MVA compensation system to the Commonwealth social service data [24]. Using these data sets would enable us, for example, to track what happens to a person after they leave a workers' compensation system. Do they receive Newstart Allowance or the DSP? Does their use of healthcare services increase or decrease? How many medications are they prescribed? Answers to these questions can help improve the co-ordination between income support systems, and may also help to identify preventable causes of long-term work incapacity. Needless to say that at present, no data sources permit examination of the movement of recipients between systems.



Linking structured datasets can create more comprehensive information at a population, cohort or individual level.

Opportunities

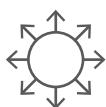
We have presented the income support systems in the map as a sort of ‘cascade’ of systems that individuals may access when certain events occur or after periods of work incapacity have accrued. We have described the systems that become accessible close to the onset of illness or injury as ‘upstream’ systems, and those that are more distant (in time or in duration of work incapacity) from illness onset as ‘downstream’ systems.

There are substantial opportunities within this cascade to intervene in ways that will improve health, work, social and economic outcomes. The opportunities to make the greatest impact are in the upstream systems, as interventions at this point can also have positive impacts downstream. For example an intervention that improves the health and well-being of workers while they are in work will reduce the number of workers who become ill and have long periods of work incapacity, and this in turn will reduce the flow into the downstream systems and reduce the overall burden of work incapacity in society. However there are also significant opportunities to intervene in the downstream systems.

All of these activities are in part prevention activities, in that the goals are to either prevent the occurrence of illness or injury, or to prevent the negative consequences of illness or injury such as long term work incapacity.

Using an approach that has been highly effective in public health, we can characterise each of these opportunities as either primary, secondary or tertiary prevention. Primary prevention aims to prevent disease or injury before it occurs. This is done by preventing exposures to things that cause or contribute to illness or injury, altering unhealthy or unsafe behaviours, and increasing resistance to disease or injury should exposure occur.

Secondary prevention aims to reduce the impact of a disease or injury that has already occurred. This is done by detecting and treating disease or injury as soon as possible to halt or slow its progress and its impact on ability to work, to implement strategies to prevent re-injury or recurrence, and programs to return people to their original health and work function to prevent long-term problems. Tertiary prevention aims to minimise the long-term consequences of an illness or injury. This is done by helping people manage long-term, often-complex health problems and injuries (e.g. chronic disease management) in order to improve as much as possible their ability to function in work and to reduce their degree of work incapacity.



Information and data sharing



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Figure 4 Opportunities for improvements in income support systems

	OPPORTUNITY / OBJECTIVE	INTERVENTION TYPE	TARGET POP'N
Upstream	Improve worker health	Primary prevention	Many
	Prevent illness and injury		
	Reduce working time lost	Secondary prevention	
	Maximise work function		
Downstream	Minimise long term incapacity	Tertiary prevention	Few

Using this framework, it is clear that each of the systems we have mapped have a different range of intervention opportunities, when acting alone. For example in the social security (DSP) system the major opportunity is in tertiary prevention, given that people have often experienced a long period of work incapacity upon entry to the system. In contrast the Employer Entitlements system the major opportunity is in primary prevention. This framework also makes clear that for all systems, there is a major opportunity in collaboration and cooperation, in order that the most effective and efficient approaches to primary, secondary and tertiary prevention are implemented.

Through interviews and document analysis we have identified a number of significant opportunities. These are aggregated into six higher order categories. These have positioned within the public health model and we have sought to provide examples of each.

Information and Data Sharing

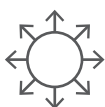
Interviewees reported that the activities of individual systems can impact on other systems. This can occur, for example, when a system modifies its eligibility rules, or when the benefits and services provided in a system change, or when new or modified processes are introduced. There are multiple examples of such events in recent years in Australia. For example, among the 2012 legislative amendments to the NSW workers' compensation scheme were a restriction on eligibility for people injured while travelling to work, and the capping of income support to a maximum 5 year period. A reasonable person would propose that the introduction of these changes will lead to people seeking income support through other systems, specifically **(a)** people injured while travelling to work would be more likely to seek access to benefits through the NSW motor vehicle accident compensation scheme; and **(b)** people with long-term incapacity leaving the NSW workers compensation scheme after 5 years will be likely to seek income support through the Commonwealth social security system. Multiple other events likely to have had 'flow-on' impacts to other systems are evident in recent years, including multiple changes to benefits and eligibility in the South Australian workers compensation scheme, changes to eligibility and work capacity assessment processes for the Disability Support Pension, and the impending implementation of significantly revised NSW motor vehicle accident compensation legislation.

It was also apparent through our interviews that while each system has people with high degrees of expertise and experience in their system, very few have any exposure or knowledge of the other income support systems. Cross-sector knowledge is very limited.

There is substantial potential for systems to share information and data to improve cross-sector knowledge, and to promote a shared understanding of the 'system of systems' of income support in Australia. This would have the objective of improving mutual understanding of the activities, services and plans of other systems including activities. One example of such information sharing might occur when a system is planning a change to policy, product design or eligibility that may have flow-on effects to other systems.

It would be valuable to have bi-directional information flow between upstream and downstream systems. For example it would be beneficial for life insurers and social services to understand the characteristics of people with long-term incapacity leaving the short-tail workers' compensation schemes. This may assist in planning service provision for those entering these downstream systems. Similarly, life insurers and social services systems advising workers compensation regulators of the number and characteristics of work-related cases entering their systems may provide useful information for workers' compensation systems to assess their performance in meeting objectives of return to work and rehabilitation.

In the data section above we also identified the significant potential for data linkage and sharing activities. Data sharing will be critical to quantifying the movement of people between systems, which as described is currently a significant gap in knowledge. Some systems are making substantial effort to centralise and link their data to others. The development of a complete map of the Australian income support systems will require all systems to share such data.



Information and data sharing



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Better Aligning Service Models

Our analysis of the services demonstrated that while many services are funded, provided or made accessible through the systems, the service delivery models vary considerably and there are substantial differences in the nature and extent of services between systems. However there are also many areas of overlap. Notably all of the systems provide some form of case management. All of the systems interact in some way with the healthcare systems, and most require involvement of primary care practitioners. For people with more than temporary incapacity, all systems enforce some form of work capacity assessment or independent medical examination to determine eligibility for income support or healthcare, or confirming ongoing access to treatment.

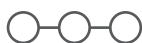
These areas of overlap provide opportunities to align service models between systems, to consolidate resources, develop best practices in service delivery, and ultimately to improve the efficiency and effectiveness of service delivery. Two examples were provided on multiple occasions through interviews.

First, multiple interviewees noted that access to system benefits usually requires medical certification, and that in the vast majority of cases certification is performed by a General Practitioner. However at present each system requires GPs to complete certificates in different formats, and that there are multiple approaches to reimbursement for GPs. While there have been some attempts to reform certification practices, there is very little consistency. This means that in practice, an individual GP may be required to understand and navigate a range of income support systems, and provide information to their patients regarding these systems. While there has been some research on the complexity of the GPs role within the workers' compensation systems [\[25\]](#), this is exacerbated by these cross-system differences.

Second, interviewees noted that the approach to work capacity assessment varies substantially between systems. This includes differences in the standards against which degree of impairment are rated, but also variation in the purpose for which such assessments are requested, the use of data, and the sharing of information [\[26\]](#). Numerous impairment standards are used, ranging from different versions of the AMA guides in workers' compensation and MVA systems to the impairment tables in the social security system. The problems with these assessments and their capacity to cause harm have been reported [\[27\]](#), and thus a cross-sector approach to developing a best practice in medical assessment seems sensible.



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Earlier Intervention

One important assumption of the public health model is that early intervention is likely to produce the greatest benefits for the individual and also at a community level. This is also a commonly held view in many of the income support systems, and there are many published examples of early intervention reducing work disability for people with conditions that are common in the Australian income support systems, for example musculoskeletal disorders [28].

Interviewees reported opportunities to intervene early both within their own system, but also when prompted identified opportunities to intervene in the upstream systems in ways that would benefit downstream systems.

Some of the examples provided include:

- Early identification of people with complex health conditions or risk factors for delayed recovery or return to work in workers' compensation systems (sometimes called claims 'triage');
- Providing access to rehabilitation for people in the waiting period of a life insurance claim;
- Providing access to condition specific healthcare to people when they first apply for access to social security benefits, for example Cognitive Behavioural Therapy for people with Anxiety or Depression; and
- Providing resources to employers to help them identify employees with health conditions who are still working, but who may be at risk of leaving the work place.

There are likely to be many such opportunities for earlier intervention.

For the cross-system approaches to be effective a better understanding of cases likely to proceed / transfer onto other systems will be required.



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Employer Engagement and Influence

The critical role of employers in prevention and rehabilitation was noted by interviewees, and is supported by analysis of published research. There is substantial potential to improve health and work function through workplace health promotion, injury and illness prevention and rehabilitation programs. The powerful role of employers in supporting return to work among those who have left the workplace was also noted, as was the potential for employers to take a more proactive role in providing employment for people who have experience long periods of incapacity and/or those with significant disability.

Interviewees noted that at present, each of the systems was attempting to engage and influence employers on one or multiple of these aspects. For example some workers' compensation systems are supporting workplace health promotion activities. Life insurers are funding workplace health assessment [29]. Superannuation funds have established a not-for-profit focussing on mentally healthy workplaces [30]. There appears to be consensus that while there are some examples

of outstanding employers, these are very few and that progress is slow. This fragmented, system specific approach to employer engagement is unlikely to yield significant results in the short to medium term.

It is also apparent that there is a wide variation in the activities of employers related to prevention, health promotion and rehabilitation. This may partly be dictated by the size and resources available to employers, but even among large employers there is significant variability. One recent Australian study described factors affecting employer's approach as including perceptions surrounding the importance of healthy workers; beliefs around the role the workplace should play in influencing health [31]. Some interviewees noted that the 'business case' for greater employer action had not yet been clearly articulated.

Thus there is potential for a joint approach to employer engagement (a 'unified voice'), to develop a clearer business case that will encourage greater action and accelerate the pace of change.



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Earlier intervention



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Product and Benefit Design

Analysis of benefits and services provided across the systems reveal a number of sub-optimal features that may contribute to negative outcomes or experiences, particularly in people with long-term incapacity. These include:

- Gaps in coverage where the person must rely on their own financial resources or seek to access the social safety net. For example during the waiting period for life insurance claims, or during the claim determination period in MVA compensation systems;
- Restrictions on the ability to fund services that may reduce the severity of health conditions and the duration of time off work (for example in Life Insurance systems) or dissociation of systems of income support from systems that can fund services to reduce the need for income support (for example the dissociation of social services and Medicare systems);
- Complex rules and procedures that may encourage people to seek independent representation to navigate systems. Representation itself is not a problem, but there is now evidence demonstrating an association between legal involvement, ill health and disability in some systems [\[32\]](#).
- Substantial step-downs (and sometimes ‘cliffs’) in the amount of income support provided as people transition from one system to another, or when lump sum payments run-out. This usually occurs in people who have already been off work for a substantial period of time and has reduced prospects of re-entering the workforce. Such step changes in income can present significant financial challenges for these individuals.

There is potential for individual systems to consider the design of their benefits and products in the context of the surrounding systems.

For example it might be feasible for life insurers to also offer health insurance as a component of their insurance product. It may also be feasible for lump-sum systems to pay sums in instalments while an accepted claims is being determined, to enable earlier access to funds and reduce exposure to income step changes.



Information and data sharing



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Earlier intervention



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System Transitions

As is evident from this report, there has been a lack of focus in Australia on the movement of people between systems of income support. It is also evident that a substantial number of Australian's make such transitions, although it is not currently possible to develop accurate estimates nor to identify the characteristics of people who do move between systems.

Through interviews we identified that there is currently very little effort to support people who are moving, or preparing to move, from one income support system to another. Specifically, interviewees identified that people approaching the end of the income support period in the workers' compensation (short tail), MVA (statutory benefit) or life insurance (income protection) systems could be provided with information and support to make the transition to another system. This could include practical assistance such as financial planning and access to healthcare or disability assistance, and may also provide opportunities to re-engage the person with occupational rehabilitation and/or job finding services.

One example of an organisation supporting people through these transitions is MS Australia. MS Australia provides a specialised employment support service for people diagnosed with Multiple Sclerosis that can begin when a person is still employed and focusses on helping the person to maintain employment. The service also extends to period of unemployment that may occur as the disease progresses. The service focuses on supporting people with MS to manage symptoms and access healthcare that can improve their ability to work, and also to seek work that is suitable. In recent evaluations of the MS Australia has received the highest level of accreditation under the commonwealth Disability Employment Services star rating system. This example demonstrates the potential for tailored support in system transitions.



Information and data sharing



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Product and benefit design



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Policy Reform

Policy underpinning our national approach to income support is as fragmented as the systems themselves. As shown in [Table 26](#) (Appendices), the various systems are established under many different Acts of Parliament at the commonwealth, state and territory level, regulated by a wide array of organisations across levels of government, and administered by an even wider array of public and private sector organisations, some operating nationally and some operating within states and territories.

Not surprisingly given this context, interviewees raised the potential for significant policy reform, citing examples from other countries of more streamlined approaches to supporting people with work incapacity ([Table 14](#)). Interviewees also noted this may be a longer-term objective, requiring further development of the evidence base, a significant public discussion and policy debate.

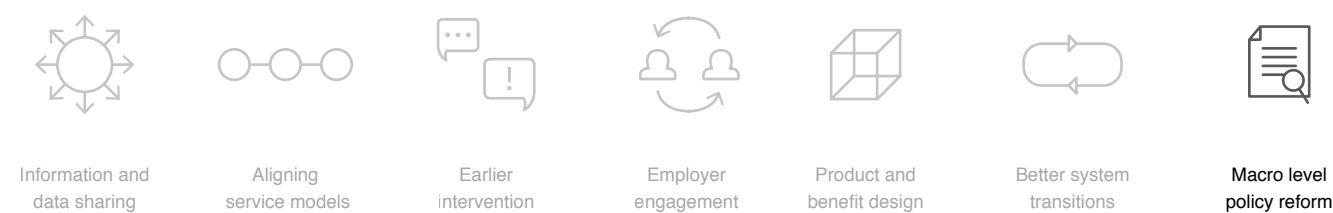


TABLE 14 INCOME SUPPORT SYSTEMS IN NEW ZEALAND AND THE NETHERLANDS

Country	Description
New Zealand	<p>A single organisation (The Accident Compensation Corporation or ACC) manages and underwrites all injury claims in New Zealand, including the equivalent of our workers compensation and MVA compensation claims, but also extending to injury occurring outside of these settings. The ACC is a national no fault, statutory benefit scheme that provides funding for healthcare and treatment and return to work services, as well as income support.</p> <p>New Zealanders who are not injured, but who have an illness or disability that restricts their ability to work are covered by a range of benefits and supports provided by Work and Income in the Ministry of Social Development. This includes Job Seeker Support, Supported Living Payment or Employment Transition Payments.</p>
The Netherlands	<p>Employers are liable for up to two years of paid sick leave at a minimum rate of 70% of normal weekly earnings in the Netherlands, for employees who are unable to work due to illness, injury or disability. This is a disability based system which means that the workplace need not be the cause of the illness or injury. Legislation requires that both the employer and worker do 'all they reasonably can' to increase the likelihood of a return to work during this time. If a worker is not employed with entitlements (e.g., a contractor, labour hire) then the government will pay 70% of the worker's daily pay up to a maximum cap for a maximum of two years [33].</p> <p>The Netherlands also operates a national level social security system for those people with disabilities, similar to Australia's DSP. However, where the DSP pays a fixed rate calculated from means testing, the Netherlands pays an income protection rate to those recipients who were previously working. If an employee becomes 'fully and permanently incapacitated' then the government will pay 75% of their prior earnings, up to a cap. This rate changes if the individual is partially incapacitated, but the system is designed more comparably to Australia's catastrophic injury schemes rather than our social security system.</p>

Conclusions

This project has described Australia's system of income support for people with health conditions affecting their work capacity. This system of systems can be described as highly fragmented and very complicated. Each individual system is effectively isolated from the others, and within some systems sub-components are isolated from others by jurisdictional, geographical or commercial boundaries. Each of the ten systems mapped have complex rules and processes to determine eligibility and with respect to benefit provision and service delivery. This complexity makes it difficult for an educated reviewer to understand the interaction between systems, and is a substantial barrier to effective engagement with the systems' common stakeholders - workers, employers and healthcare providers.

The project has identified multiple opportunities to improve work and health outcomes through greater cross sector collaboration. There are many reasons to pursue these opportunities. In addition to workers, all of the parties involved in funding, regulating and administering the systems stand to benefit from taking action in these areas.

Some potential benefits include:

- *For employers*—reductions in the number of employees with health conditions affecting their work capacity, with associated improvements in productivity. Other benefits may include reductions in turnover, 'employer of choice' status and reduced costs of insurance.
- *For insurers*—improvements in service provision to customers resulting in greater customer satisfaction, as well as lower claim volumes and lower payments. There are also substantial opportunities to innovate in product and benefit design and differentiate from competitors.
- *For healthcare providers*—more efficient engagement with the multiple systems of income support, and improvements in interactions with system administrators.
- *For governments*—an enhanced ability to develop policy and programs that have a positive impact on health and work of working age Australians, as well as more efficient and effective interactions between levels of government and with industry. Ultimately improvements in prevention and rehabilitation will result in fewer people with long periods of incapacity entering the social security system, lower claim volumes for MVA and workers compensation regulators and reductions in expenditure on time loss claims.

Other benefits arising from reduction in periods of work absence that are particularly relevant for the commonwealth government include improved health will include increases in retirement incomes (and thus reductions in the need for Age Pension) as well as reduced healthcare utilisation (and thus reduced healthcare spending).

Ultimately taking action will also benefit individual workers through reducing working time lost to illness, injury and disability. Improving engagement in employment confers a range of benefits. Primary among these benefits are health gains, but there are also financial and social benefits from participation in employment.

A very large number of Australians of working age access our major systems of income support during periods of temporary or permanent incapacity. The health and economic cost to society is very substantial. There are many opportunities to reduce this burden and to significantly increase the health and productivity of our working age population.

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Appendix 1 – Scope

Scope

The population, systems, services and data that are in-scope for the project are described below. The scope was agreed through meetings of the project working group at the commencement of the project.

Population

As defined by the Cross Sector Project working group on 7th June 2017, the population to which the project relates is as follows:

- relates to people of working age (16 and less than 65 years);
- who have acquired a temporary or permanent injury, illness or mental health condition, which can be either work or non-work related;
- whose injury/illness completely or partially impacts their ability to work
- who were working in either temporary or permanent remunerated employment at the time the injury/illness was acquired.

Systems

Ten systems defined on the basis that they provide income support for the population in scope were selected as in-scope for the project. These are summarised in [Table 15](#) below.

TABLE 15 SYSTEMS OF INCOME SUPPORT

System	Description of Income Support
Employer Provided Leave Entitlements	Rights to annual leave, sick leave and unpaid leave are included in the national minimum employment standards. Such entitlements are available to the majority of Australian workers, but may vary substantially between industries, employers and employees.
Workers' Compensation (short-tail schemes)	Provide periodic (usually fortnightly) income support payments to workers if they are injured or become ill in the course of employment, and who require time off work. We have defined short-tail schemes as those which limit support to five years or less for the majority of claimants. The maximum duration and magnitude of income support varies between short-tail workers' compensation jurisdictions.
Workers' Compensation (long-tail schemes)	Provide periodic (usually fortnightly) income support payments to workers if they are injured or become ill in the course of employment, and who require time off work. In long-tail schemes workers may be eligible for statutory income support for periods greater than five years and in most long-tail schemes until retirement age. The magnitude of income support varies between long-tail workers' compensation jurisdictions.

TABLE 15 SYSTEMS OF INCOME SUPPORT

System	Description of Income Support
Motor Vehicle Accident Compensation (lump sum benefit schemes)	Lump sum Motor Vehicle Accident (MVA) compensation schemes may provide a lump sum payment for current and future economic loss to people injured in a MVA, whose injury affects work capacity, and who are not at fault.
Motor Vehicle Accident Compensation (statutory benefit schemes)	Statutory benefit MVA compensation schemes provide income support through periodic (usually fortnightly) payments to people injured in a MVA and whose injury results in time lost from work. All states and territories now have catastrophic injury schemes that provide income support benefits until retirement age for seriously injured people. The magnitude and maximum duration of income support for people with mild to moderate injury varies between MVA jurisdictions.
Life Insurance (income protection policies)	Provide periodic (usually fortnightly) income support payments to people with health conditions that result in periods of time off work. Most income protection (IP) policies require the person to have used their employer entitlements and to have completed a waiting period. IP policies vary substantially and may be provided through retail (private) programs or through group (superannuation) schemes.
Life Insurance (total and permanent disability policies)	Total and permanent disability (TPD) policies provide a lump sum payment for current and future economic loss to people with a health condition that results in a permanent incapacity to work. Most TPD policies require the person to have used their employer entitlements and to have completed a waiting period. TPD policies vary substantially and may be provided through retail (private) programs or through group (superannuation) schemes.
Social Security	Provide a range of periodic (fortnightly) income support benefits, allowances and supplements to people who meet eligibility criteria. The major income supports are unemployment (Newstart Allowance), Disability Support Pension (DSP) and the Age Pension. For this project we have defined Newstart Allowance, DSP, Youth Allowance and Sickness Allowance as in-scope. The array of other social security benefits and supplements have been excluded.
DVA Comp and Pensions	The Department of Veteran's Affairs provides periodic (fortnightly) income support payments for veterans under 60 years of age with work incapacity resulting from their service through a workers' compensation scheme, and to veterans over 60 years of age through a pension scheme.
Superannuation Withdrawals	Australian's are able to access superannuation prior to retirement age under special circumstances. For this project we have included withdrawals from superannuation in cases of terminal medical condition, temporary or permanent incapacity. Payments may be made as lump sums or as periodic payments.

These ten systems represent most of the income support systems in Australia, but it is not an exhaustive list. Also there are service systems that do not provide income support which were out of scope. For the purpose of clarity the out of scope systems include: Life Insurance (other than TPD and IP policy types); Victims of Crime Compensation; Medical Negligence Compensation; Social Security Benefits not specifically listed as in scope; Medicare; Pharmaceutical Benefit Scheme; Private Health Insurance; National Disability Insurance Scheme; and other systems not specifically listed as in scope.

It should be noted that services provided by some of these systems may be included in the mapping of services (see below) where they intersect with the in-scope income support systems.

Services

The following major categories of services where they are provided by or funded by, the in-scope systems:

- Return to Work Services (where the goal is to return the person to the pre-injury/illness employer)
- Job Finding or Employment Services (where the goal is to find new employment for the person)
- Healthcare / Medical / Treatment services
- Functional Supports (defined as provision of aids, equipment, or other supports to assist the person to maximise their functional capacity)
- Case Management / Case Co-ordination / Claims management

A number of services were excluded from scope, to ensure the mapping exercise was feasible within the project timeframe. These included services provided to people other than the in-scope population (e.g., services directed at carers or employers); legal and dispute resolution services; education and training that are not part of the in-scope services; financial incentives or payments that do not relate to a specific service (e.g., permanent impairment lump sums); and other services not specifically listed as in scope.

Data

Finally we defined the following data sources as within scope for the project:

- Structured data captured in an electronic database where the data custodian (organisation with 'ownership' of the data) operates within an in-scope system or provides an in-scope service.
- Structured data captured in an electronic database that may facilitate an understanding of movement of people between systems (e.g., taxation records).

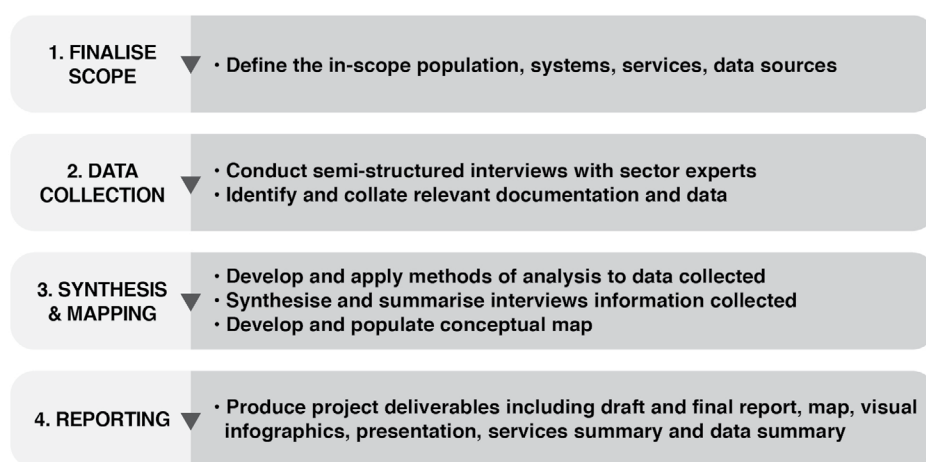
Unstructured data (e.g., case notes, interviews, video recordings), data not captured in an electronic database, and data not available within Australia were considered out of scope.

Appendix 2 – Methods

Method

The project was conducted over four months in late 2017 (late August to mid-December), and consisted of four main phases (illustrated in the figure below). Each stage was conducted consecutively, with completion of each stage preceding the beginning of the subsequent stage.

Figure 5 Overview of project method



The first stage involved finalising the project scope, including the systems, services and data to be included in the mapping exercise, and to refine and confirm the project methodology. This occurred through meeting with the project working group in the first few weeks.

Data Collection

Two major data collection activities were undertaken, being **(1)** interviews with sector experts; and **(2)** collection of system documentation and data.

SEMI-STRUCTURED INTERVIEWS

A total of 20 semi-structured interviews were conducted involving 25 individuals with expertise in one or more of the ten in-scope systems. Interviews were conducted over the telephone or face-to-face. To guide the interviews and ensure collection of relevant data, the research team developed an interview schedule in consultation with the project working group.

The schedule covered five major areas:

1. The scope and features of a given system including coverage and eligibility (system boundaries), structure and governance, decision making processes;
2. the scope and features of services, supports and benefits provided by the system including types of services and support, service delivery models, and service providers;
3. interactions between systems and services, including points of interaction between the system and other systems, information on movement of people between systems and triggers for movement, and how changes in features of the system (coverage, eligibility, services etc.) may impact other systems or vice versa;
4. sources of data that describe system function and performance, and may be used to identify activity within a system and movement of people between systems; as well as data gaps; and
5. opportunities for improving work and health outcomes including through changes in systems scope / features, service provision or coordination with other systems.

Interviewees were identified through referrals from the Collaborative Partnership and through the research teams own networks. Interviewees were identified on the basis that they had a substantial degree of expertise and experience within their individual system and can comment knowledgeably on system features, services and data availability. In addition some interviewees with experience and expertise working across systems were also identified for inclusion.

DOCUMENT AND DATA COLLATION

Concurrently with the interviews, the project team sourced documents and data describing system features, services and participants. Document and data identification occurred through two primary pathways. First, information was provided from members of the project working group and from interviewees. Second, a grey literature search was conducted by the research team. This included **(a)** a structured search of websites, document clearing-houses and research libraries using pre-determined keywords; and **(b)** hand searching of reference lists of documents provided by working group members and interviewees, to identify further relevant documents.

Documents identified included legislation, policy documents, system performance reports, data summaries, financial statements, annual reports, data dictionaries, claims handling manuals, and academic research. Identified documentation was collated in a structured document library, with summary notes identifying the source and content of each document. An annotated bibliography is provided in the [Appendix 5](#).

Synthesis and Mapping

Synthesis occurred in a step-wise manner.

First, for each of the ten in-scope systems, information collected through interviews and document collation was combined to produce an overarching system description. These individual system descriptions included information on system structure, governance and operations, coverage, benefits and entitlements, eligibility, services, processes and timing, outcomes, data sources, and interactions with other systems. Draft system descriptions were provided to members of the project working group and to some interviewees to ensure accuracy. One important component of the system description was the creation of an individual system map, identifying the interaction with the system in question with other systems one-degree removed from that system.

Second, a services summary was produced. This summarised the major services and supports provided by each system. This included information on the nature of service provision, the service delivery models in place, as well as the interaction of services between systems.

Third, a summary of data sources was produced. For each dataset identified during data collection we described the data custodian (organisation holding the data), the type of information included in the dataset, processes for accessing the dataset, the ability to link the dataset to other available datasets, and any examples of published information from the dataset.

Fourth, the number of people accessing each of the systems for the 2015/16 financial year was determined. Our approach to calculating the 'stock' of recipients is described in [Appendix 3](#). We were also able to calculate the total cost of income support provided to the in-scope population in each system, and the minimum and maximum benefits paid in each system.

It became apparent during the data collection phase that there was very limited data regarding the movement or 'flow' of people between systems. Our **fifth** step was then to review the eligibility criteria for entry into each system, in order to determine the factors that conferred eligibility. This process identified nine major factors related to the person, their health condition, employment and family circumstances that collectively, determined whether they were eligible to access one or more of the in scope systems.

These five activities created a set of primary information sources which were then used to develop the system map. The map is a conceptual visual representation of the 'system of systems' that includes information about the scale of income support provision (the number of people accessing benefits), the average duration of income support, the sequencing of the various systems during the period of work incapacity, and the hypothesised most common pathways between systems for people with long periods of incapacity. The map is supplemented by additional visual presentations of some summary information on each system, and a series of case studies developed to illustrate how features of an individual, their health condition, employment and social circumstances can affect eligibility for specific systems.

Finally, we summarised information collected from interviews and from our own observations, into a document describing **(a)** opportunities for improvement in work and health outcomes; and **(b)** opportunities to determine the movement of people between systems.

Reporting

The information gathered through these prior stages was then documented in this report. The report is presented in a format including **(a)** 1-page overview; **(b)** an executive summary; and **(c)** the main body of the report. A number of appendices are included describing the more detailed information that is not included in the body of the report.

Appendix 3 – Stock Calculations

Employer Provided Entitlements

Not all Australians in the labour force have statutory leave entitlements. For example, casual workers, sole traders and some others may have limited or no access to sick and annual leave. The number of persons with sick leave entitlements was calculated as the sum of the number of employees with paid leave entitlements, plus the number of people employed in Owner Manager Incorporated Enterprises (OMIEs), as per the 2016 ABS Characteristics of Employment Data [34]. We assumed that 80% of people with sick leave entitlements took at least one day of paid sick leave per annum³.

The average absenteeism for 2016 was reported in Direct Health Solutions 2016 Absence Management Survey Report as 9.5 days (1.9 weeks) per employee per annum [35].

Given Australian Average Weekly Earnings (Gross) for full time employees and OMIEs of \$1,506 per week, the cost per employed person with entitlements per annum was \$2,861, and the total expenditure in Australia was estimated to be \$18.7 billion. To calculate the weekly benefit we assumed that people receive their usual wage while on sick leave.

Workers' Compensation Systems (Short and Long-Tail Schemes)

By definition 100% of cases in these systems are for people who have acquired a health condition in the course of work. Thus our task was to estimate the number of accepted time loss claims from the ten major workers' compensation systems in Australia.

The number of new recipients with claims resulting in at least five days of time loss is reported in the Safe Work Australia Comparative Performance Monitoring Report (19th ed.) [7]. This data is provided by the workers compensation regulators, but underestimates the total number of recipients as it excludes cases with time loss from 1 to 4 days. Nevertheless we used this as our baseline.

We extracted all expenditure data from system level annual reports for the 2015/16 year and the CPM report. To calculate the minimum and maximum weekly benefit we reviewed the income replacement rates stated in jurisdictional workers' compensation legislation. These rates vary from 65% to 100% of pre-injury AWE.

³ Based on the research team's experience analysing sick leave datasets across multiple industries including healthcare, transport and education.

Motor Vehicle Accident (Statutory Benefit Schemes)

We extracted data from annual reports and scheme analyses from each jurisdiction to determine the total number of new compensation claims for the 2015/16 year. These reports do not typically report separate claim numbers for our in-scope population. We assumed that 30% of all claims were from people in paid employment at the time of their motor vehicle crash⁵.

We extracted all expenditure data from system level annual reports for the 2015/16 year. To calculate the minimum and maximum weekly benefit we reviewed the income replacement rates stated in jurisdictional workers' compensation legislation. These rates vary from 75% to 100% of pre-injury AWE.

Motor Vehicle Accident (Lump Sum Benefit Schemes)

The number of claims settled in a given year was taken from jurisdictional annual reports and statistical reports. As stated above, for lump sum systems we assumed claim settlement indicated payment of the lump sum and thus receipt of income support.

We were unable to identify data to indicate the proportion of settlements that include a component for economic loss. We assumed that 30% of settled claims involved an economic loss component⁶, and that in these claims half of the settlement amount was for economic loss⁷.

Life Insurance (Income Protection Policies)

By definition 100% of cases in these systems are for people who have acquired a health condition while in employment. Thus our task was to estimate the number of people receiving income support through claims against IP policies from the nation's life insurance IP schemes.

The total number of IP claims for group income protection policies provided through Superannuation funds are reported in the APRA Superannuation Bulletin 2016 [36]. This includes claims reported, admitted and paid. The total expenditure on group IP claims is reported in the APRA Quarterly Life Insurance Statistics [37]. These two figures allowed us to determine an average cost per claim. The number of IP claims from retail funds are not reported, however the total expenditure on these claims is reported in the APRA Quarterly Life Insurance Statistics. We assumed that group and retail claims were equivalent in cost and thus was able to derive from the expenditure data an estimate of the number of IP claims for retail funds.

To calculate the minimum and maximum weekly benefit we assumed the industry standard was that IP policies cover 75% of normal weekly earnings. To account for the policy variation in the sector we applied a 10% buffer above and below this standard, creating a range of 65% to 85% of PIAWE⁸.

⁵ Based on figures provided by the Transport Accident Commission in the State of Victoria and from the research team's analysis of TAC claims data.

⁶ Based on TAC claims data and input from experts interviewed.

⁷ This is the formula applied by the DSS to determine preclusion periods for social security benefits among recipients of lump sums.

⁸ Based on input from interviewees. We acknowledge that policies vary considerably but sought to represent the 'usual range' of income support.

Life Insurance (Total and Permanent Disability Policies)

The number of TPD claims for group income protection policies are reported in the APRA Superannuation Bulletin 2016 [36]. We counted the number paid during the year. The total expenditure on group TPD claims is reported in the APRA Quarterly Life Insurance Statistics [37]. These two figures allowed us to determine an average cost per claim. The number of TPD claims from retail funds are not reported, however the total expenditure on these claims is reported in the APRA Quarterly Life Insurance Statistics. We assumed that group and retail claims were equivalent in cost and thus was able to derive from the expenditure data an estimate of the number of TPD claims for retail funds.

Social Security

For Newstart Allowance and Youth Allowance we assumed that recipients with a partial capacity to work (<30 hours per week) are likely to have a health condition that has prevented them from working. The proportion of total recipients with partial work capacity is reported in the DSS Demographic Statistics June 2016. We included these as our in scope recipients. We assumed that income support expenditure was equivalent to the average for Newstart Allowance and Youth Allowance to determine the total expenditure on these benefits.

For sickness allowance we assumed that 100% of recipients and 100% of expenditure was in scope as eligibility is dependent on the recipient having an employer to return to.

To calculate the minimum and maximum weekly benefits we extracted the minimum full rate for each benefit type from DSS policy documentation, and then added the maximum number of additional supplements and allowances for each benefit type, to derive the maximum.

Social Security (DSP)

The DSP summary statistics provided by the DSS provide information on assessed work capacity of DSP recipients. Of the total population of DSP recipients, 64% have been assessed.

The remaining 36% have not had work capacity assessed. We understand that those not assessed include people with manifest conditions and those who were accepted onto the DSP prior to 2006. The capacity assessment data also includes the estimated work capacity in hours per week. This includes groups of 0 to 7 hours, 8 to 14 hours, 15 to 22 hours, 23 to 29 hours and 30+ hours.

First, the non-assessed recipients (N=273,257) were excluded. All recipients with an assessed work capacity were considered potentially in scope, as they met two of the three conditions, being presence of a health condition and limitations on work capacity.

Second, for the group with 0 to 7 hours capacity it was assumed that 50% of recipients had at least one hour per week of assessed capacity, and thus we excluded the remaining 50% (N=98,826).

Third, for the remaining recipients we applied the ABS employment to working age population ratio which shows the number of people that are employed (aged 15 to 64 years) as a percentage of the working age population (civilian population aged 15 to 64 years). Over the most recent decade this ratio is approximately 73%.

We assumed that income support expenditure was equivalent to the average for DSP to determine the total expenditure on these benefit for the 2015/16 financial year.

DVA Comp and Pensions

The number of active recipients was reported in the DVA Annual Report 2015–16 [38].

We included only in-scope programs from each relevant act, specifically:

- VEA: Program 1.2 – Disability Pensions
- SRCA – Incapacity Payments
- MRCA – Incapacity Payments

We used the age profiles reported in the DVA Summary Statistics [39] to determine the proportion of total recipients in scope (<65 years of age) for each of these programs. Income Support cost was reported in the DVA Annual Report 2015–16. We applied the in-scope proportions to this cost, and calculated the mean wage replacement cost using the number of active claims. To determine the proportion of DVA pensioners (60 to 65 years) with health related work incapacity we assumed that 100% of disability pensioners under 65 years of age were in scope, but that all other pensioners were out of scope.

To calculate the minimum and maximum weekly benefits for incapacity payments we reviewed the income replacement rates stated in the MRCA and SRCA legislation. These rates vary from 75% to 100% of pre-injury AWE. For the DVA disability pensions we extracted the minimum full rate for each benefit type from DVA policy documentation, and then added the maximum number of additional supplements and allowances for each benefit type, to derive the maximum.

Superannuation Withdrawals

The total number of settled claims for withdrawals from superannuation funds, and total expenditure were reported in the APRA Superannuation Bulletin 2016 [36]. Only withdrawals due to terminal medical conditions, permanent incapacity, and temporary incapacity were included. Both lump sum benefits and pension benefit accounts (those accessed for insurance in the same year they were opened) were included. We assumed that prior to any superannuation withdrawal the recipient was contributing to a superannuation fund and thus was in paid employment. We therefore included 100% of the claims and costs reported in these categories. The mean claims expenditure was calculated using the total claims expenditure and number of active claims.

Appendix 4 – Data Summaries

The following section contains summaries of datasets reviewed.

TABLE 16 NATIONAL DATASET OF COMPENSATION BASED STATISTICS

System	Workers' compensation
Name of Dataset	National Dataset of Compensation Based Statistics (NDS)
Custodian	SafeWork Australia compiles the database. Data is provided to SafeWork Australia annually by the state and territory workers' compensation regulators
Coverage	Includes data on accepted workers' compensation claims from all Australian workers' compensation systems with the exception of DVA. Data collection began in 2003 and is updated annually.
Purpose	The NDS is used to monitor trends in national occupational injury and illness, and for research purposes. Industry-level statistics are published by SafeWork Australia with occasional issue specific publications. The NDS has also recently been used in a small number of academic research studies.
Fields	<ul style="list-style-type: none"> • Worker characteristics (e.g., age, sex, occupation, postcode) • Workplace characteristics (e.g., industry, size) • Type of injury / illness using standardised coding system (TOOCS) • Working time lost to injury (hours) • Claims characteristics (e.g., data of lodgement, data of acceptance) • Claims expenses (e.g., medical expenses, income payments)
Accessibility	Accessible with the permission of SafeWork Australian and the jurisdictions contributing data.
Web Address	Safe Work Australia—National data set for compensation-based statistics 3rd edition
Comments	Data is de-identified by the workers' compensation jurisdictions prior to being provided to SafeWork Australia. It does not include names, dates of birth, or address details and thus is not able to be linked to other datasets. The individual workers' compensation jurisdictions all maintain more detailed datasets that include fields that enable data linkage.

TABLE 17 PRIORITY INVESTMENT APPROACH (PIA) DATASET

System	Social Security
Name of Dataset	Priority Investment Approach (PIA) Dataset
Custodian	The Australian Institute of Health and Welfare (AIHW) extracts data from the Department of Human Services (DHS) Enterprise Data Warehouse (EDW). Quarterly data are then compiled and held at the Sax Institute in the Secure Unified Research Environment (SURE).
Coverage	Includes longitudinal data (quarterly intervals) on all social security claims made in Australia. Currently data are available from July 2001 to June 2015.
Purpose	The PIA dataset is used in actuarial analyses of the valuation of Australia's future lifetime welfare costs, but is open to researchers in future projects. The Baseline Valuation Report (PriceWaterhouse Cooper, 2016) was the first research conducted using the dataset to 'underpin' the Australian Priority Investment Approach to welfare distribution.
Fields	<p>The Department of Social Services (DSS) reports numerous variables that are currently made available:</p> <ul style="list-style-type: none"> • Demographics (e.g., age, gender, marital status, citizenship) • Income support information (e.g., benefit status code, income support benefit, partner's income benefit) • Reporting period (e.g., quarterly start and end date) • Accommodation (e.g., household rent amount, ownership status, rent type) • Location • Education • Income and assets (e.g., number of earning sources, total earnings per quarter) • Children • Disability (e.g., medical conditions, blindness indicator, job capacity assessment, work capacity assessment before and after intervention)
Accessibility	Accessible only in Sax Institute's SURE. External datasets cannot be integrated into SURE, and outputs from SURE must first be approved by the AIHW.
Web Address	AIHW—Priority investment approach dataset
Comments	Data within the PIA dataset are highly sensitive, and applications for access to SURE is assessed and provided by the AIHW on a case-by-case basis.

TABLE 18 MUTLI-AGENCY DATA INTEGRATION PROJECT (MADIP)

System	Social Security
Name of Dataset	Multi-Agency Data Integration Project (MADIP)
Custodian	Data are contributed from the ABS, Australian Taxation Office (ATO), Department of Education and Training, Department of Health, Department of Human Services, and Department of Social Services and integrated and held by specialist teams at the ABS.
Coverage	Includes all Medicare benefit claims, Commonwealth Government payments, income tax data, and all data from the 2011 Census.
Purpose	MADIP is a partnership between Australian Government agencies to maximise the value of existing public sector data to provide a detailed snapshot of Australia in 2011. The MADIP will be used for policy analysis and research only.
Fields	<p>The ABS do not currently detail exactly what fields are available, but report that these include:</p> <ul style="list-style-type: none"> • Medicare benefit claims (i.e., all publicly accessed healthcare and treatment services) • All Government payments (e.g., DSP payments, Newstart Allowance, child support, education) • Income tax • 2011 Census data (i.e., large sample size demographic data)
Accessibility	MADIP is currently not available to anyone outside the ABS team. Data from MADIP will be available to other government bodies, universities, and research groups once it has been evaluated.
Web Address	ABS—Multi-Agency Data Integration Project (MADIP) ABS—MADIP—FAQs
Comments	The MADIP is projected to be available for government bodies, universities, and researchers from June 30th 2018. The ABS notes that future integration of longitudinal data as part of the MADIP would be both feasible, and highly useful. Evaluation thus far has achieved up to 96% linkage rates between government agency datasets.

TABLE 19 DEPARTMENT OF SOCIAL SERVICES PAYMENT DEMOGRAPHIC DATA

System	Social Security
Name of Dataset	DSS Payment Demographic Data
Custodian	Department of Social Services (DSS) collates the Payment Demographic Data from basic data required for social security benefit payment provided to Australians.
Coverage	Any Australian who receives a social security benefit payment is included in the Payment Demographic Dataset. Data are non-identifiable, and where there are less than 5 recipients, the field is marked only as '<5' to preserve recipient anonymity
Purpose	The DSS Payment Demographic Data is released quarterly for public consumption and research use via the Data.gov.au service
Fields	<p>Payment Data are organised by:</p> <ul style="list-style-type: none"> • Demographic • Geography • Duration on Payment/Income Support • Rate and Earnings • Age Pension Assets • Newstart Allowance and Youth Allowance • Activity tested recipients by partial capacity to work • Exits within 3 and 12 months (NSA, PP, Sickness, and YA only) • DSP by Medical Condition • Care Receiver by Medical Conditions • Commonwealth Rent Assistance • Country of Birth (March 17 onwards only)
Accessibility	The dataset is publicly available and released quarterly on the Data.gov.au website
Web Address	DSS Payment Demographic Data
Comments	Recent additions include machine readable geographic breakdowns

TABLE 20 DEPARTMENT OF VETERANS AFFAIRS INTERNAL DATASET

System	Department of Veterans Affairs (DVA) Compensation and Pensions
Name of Dataset	DVA Internal Dataset (no specifically allocated name)
Custodian	DVA
Coverage	Includes healthcare data from the Medical Benefits Scheme (MBS) and Pharmaceutical Benefits Scheme (PBS) for veterans who use Gold and White Cards to pay for healthcare and compensation-related healthcare respectively. Also includes income support and pension payments for veteran claimants.
Purpose	DVA record structured data in several administrative databases for the purposes of tracking claimants and pension recipients through pension and superannuation systems. DVA also conducts an annual survey of approximately 5,500 personnel who leave the defence forces.
Fields	<p>Specific fields available in DVA databases are unknown at this time, however DVA report data matching with the following government agencies:</p> <ul style="list-style-type: none"> • Department of Human Services (Centrelink) • Australian Securities and Investments Commission • Australian Taxation Office • Department of Health • Registrars of Births, Deaths, and Marriages in each state • Commonwealth Superannuation Corporation • Department of Work and Pensions, United Kingdom • Department of Social Development, Northern Ireland <p>The DVA use this data matching to ensure that the correct level of Government assistance is provided to recipients</p>
Accessibility	It is unclear how to access this data.
Web Address	DVA—Factsheet IS154 - Data Matching
Comments	Further investigation is required to determine what fields are in each database the DVA holds, and who might be provided access.

TABLE 21 AUSTRALIAN PRUDENTIAL REGULATORY AUTHORITY – SUPERANNUATION DATABASE

System	Superannuation Withdrawals
Name of Dataset	APRA Superannuation Database – (Released as Annual Superannuation Bulletin)
Custodian	The Australian Prudential Regulation Authority (APRA) collates data from superannuation fund returns (under the Financial Sector (Collection of Data) Act 2001), superannuation fund returns submitted by certain exempt public sector schemes, data from the ATO regarding self-managed super funds, and returns from registered life insurers (under the Life Insurance Act (1995)). APRA hold, handle, and manage the dataset.
Coverage	Data about superannuation funds includes most superannuation funds in Australia, except those that are exempted from providing data to APRA.
Purpose	APRA release the data as the Annual Superannuation Bulletin for policymakers, regulators, trustees, and the community to determine the overall performance of the Australian superannuation system. For the purposes of assessing compensation system benefits and uses, the number and value of superannuation withdrawals per condition of release, and the coverage of insurance products, are critical information.
Fields	Fields relevant to this project include: <ul style="list-style-type: none">• Member benefit payments by conditions of release• Member benefit payments by conditions of release (trend)• Insurance products, coverage, premiums and claims• Insurance coverage – member accounts by insurance type and fund type (trend)• Insurance claims by insurance by insurance type and fund type (trend)
Accessibility	APRA publicly release the superannuation bulletin annually.
Web Address	APRA—Annual Superannuation Bulletin
Comments	Due to the relatively new data collection processes implemented by APRA, APRA recommend that researchers exercise caution when analysing and interpreting data in the Annual Bulletin.

TABLE 22 AUSTRALIAN PRUDENTIAL REGULATORY AUTHORITY – LIFE INSURANCE DATABASE

System	Life Insurance
Name of Dataset	APRA Life Insurance Database – (Released as APRA Quarterly Life Insurance Statistics)
Custodian	The Australian Prudential Regulation Authority (APRA) collates financial data from life insurers (under the Financial Sector (Collection of Data) Act 2001). APRA hold, handle, and manage the dataset
Coverage	Data about life insurer financial performance is submitted to APRA for all life insurers. This does not include information regarding reasons for life insurance withdrawals
Purpose	APRA release the dataset as Quarterly Life Insurance Statistics for policy makers, regulators, and financial institutions to determine the financial performance of life insurers in Australia. The number of individuals with life insurance, and the expenditure of claims, are important for assessing the life insurance industry's role in compensation.
Fields	Fields relevant to this project include: <ul style="list-style-type: none">• Number of members• Expenditure
Accessibility	APRA publicly release the life insurance data quarterly
Web Address	APRA—Quarterly Life Insurance Performance Statistics
Comments	Life insurance data is currently limited to only financial information, and there is no information about the number of recipients of life insurance (income protection or TPD) in publicly released life insurance data. Life insurance claims is noted in APRA's superannuation data, however this is only for life insurance included in superannuation business.

TABLE 23 COMPENSATION RESEARCH DATABASE (CRD)

System	Victorian Motor Vehicle Accident Compensation (Statutory Benefit Scheme) and Workers Compensation (short-tail)
Name of Dataset	Compensation Research Database (CRD)
Custodian	Data are provided from WorkSafe Victoria (WSV) and the Transport Accident Commission (TAC) and held and managed by the Institute for Safety Compensation and Recovery Research (ISCRR), advised by a steering committee consisting of members from WSV, TAC, ISCRR, and Monash University.
Coverage	The CRD contains most claims lodged with WSV and TAC made in Victoria since 1987 (whether accepted or denied). WSV and the TAC have used administrative databases since their establishment, making this data linkage possible. TAC clients are asked if they consent to release of data for research purposes at the time of their claim, allowing information to be lodged in the database.
Purpose	The CRD was developed to support research in the area of compensation health.
Fields	<p>MVA Compensation System related data fields from the TAC include:</p> <ul style="list-style-type: none"> • Claimant (e.g., gender, age at accident, claim status, role in road accident, socioeconomic index) • Injury (e.g., date of accident, area of accident, Glasgow Coma Scale, length of hospital stay) • Payment (e.g., amount paid by the TAC for service, service start date) • All claimants are given a de-identified claim number by ISCRR for confidentiality purposes.
Accessibility	Researchers can access the CRD once they gain approval from the Monash University Human Research Ethics Committee (MUHREC). Common requirements include demonstration of safe and secure storage of CRD data, approval from the CRD steering committee, and evidence that the use of data will not harm claimants.
Web Address	ISCRR—Compensation Research Database (CRD)
Comments	<p>Data are provided to ISCRR (the custodian) annually, who also perform quality assessment.</p> <p>Further data will be added to the CRD dataset, including TAC issued medical certificates, and the Victorian Working Population Survey</p>

TABLE 24 HOUSEHOLD, INCOME AND LABOUR DYNAMICS IN AUSTRALIA (HILDA) SURVEY

System	Social Security / Employer Provided Entitlements
Name of Dataset	Household, Income and Labour Dynamics in Australia (HILDA) Survey
Custodian	The Melbourne Institute (of the University of Melbourne) is the manager of the survey. The survey is funded by the Commonwealth Government Department of Social Services (DSS). Roy Morgan is commissioned to collect the survey data for waves 9 through 18.
Coverage	The HILDA survey began in 2001 with a sample of 7,682 households (19,914 residents). This sample is nationally representative, based on randomly selected 1996 Census Collection Districts. This sample of residents is measured each year (wave). This provides coverage of a large number of nationally represented Australians in a longitudinal dataset.
Purpose	The HILDA survey collects longitudinal data on Australian residents. Collected data are analysed by researchers at the Melbourne Institute, as well as numerous external researchers. Insight gained from studying longitudinal data allows those in government to make evidence-based decisions about health, education, and social service policy.
Fields	<p>A large amount of variables is collected annually as part of the HILDA survey. Categories of fields include:</p> <ul style="list-style-type: none"> • Demographic (e.g., age, sex, historical data such as ancestry, family background) • Education (e.g., currently studying, time studying) • Children and family dynamics (e.g., resident and non-resident children, child care use) • Occupation and industry (e.g., main job, previous job(s), last job, family jobs, weeks employed, hourly wages, reason for termination from employment) • Health (e.g., physical functioning, BMI, SF-36, hospital admissions / doctor visits) • Religion • Cognitive Ability Tasks (e.g., backwards digit score, word pronunciation) • Physical activity and sleep (e.g., level of activity, hours of sleep) • Death (e.g., year of death, cause) • Parents (e.g., mother / father year of birth) <p>The HILDA survey also includes some fields as part of models, including:</p> <ul style="list-style-type: none"> • Income (e.g., income, taxation, family benefits and social welfare benefits) • Wealth (e.g., cash and equity investments, trust funds, life insurance, debts, bills) • Expenditure (e.g., bills, leisure, healthcare, motor vehicles)
Accessibility	The Melbourne Institute allow access for both individuals and organisations for a fee.
Web Address	The Melbourne Institute—HILDA Survey
Comments	Participants each a unique identifier for each wave of the HILDA survey, but this would not be useful for deterministic matching. Instead, the large volume of demographic data within the dataset could be used for probabilistic matching with other datasets.

Appendix 5 – Annotated Bibliography

TABLE 25 ANNOTATED BIBLIOGRAPHY

Documents	Description
<i>Employee Entitlements</i>	
Fair Work Ombudsman, Fair Work Handbook - An employer's guide to the Fair Work Act, Fair Work Ombudsman, Editor. 2016, Australian Government: Canberra.	This handbook provides detail for employers about their obligations to their employees under the Fair Work Act legislation. This is useful for determining eligibility for employer provided entitlements.
Fair Work Commission (FWC). National employment standards. 2017 [cited 2017; Available from: https://www.fwc.gov.au/awards-and-agreements/minimum-wages-conditions/national-employment-standards].	Describes the national employment standards (NES). This is important in determining the minimum benefits available as part of employer provided entitlements.
Direct Health Solutions. 2016 Absence Management Survey Report. 2016 [cited 2017; Available from: https://www.dhs.net.au/insight/2016-absence-management-survey-results/].	The Absence Management Survey provides coverage and expenditure estimates of a sample of 240,000 workers per annum. It is one of a few sources of data measuring employer provided entitlements.
<i>Workers' Compensation (Short and Long-Tail Schemes)</i>	
Safe Work Australia (SWA), Comparison of workers' compensation arrangements in Australia and New Zealand. 2016, Safe Work Australia: Canberra, Australia.	A highly-detailed comparison report of all workers' compensation systems in Australia. Provides detail on eligibility, benefit amounts, system processes and structure, and is produced annually with sections on legislative updates in each system. An important reference when describing workers' compensation systems.
Safe Work Australia (SWA), Comparative Performance Monitoring Report, Part 1 – Work Health and Safety Performance, in Comparison of work health and safety and workers' compensation schemes in Australia and New Zealand. 2017, SWA: Canberra, Australia.	The CPM report provides summary statistics on Australia's workers' compensation systems, including the number / proportion of compensable conditions, mechanisms of injury / illness, and nature of injury / illness per jurisdiction. These statistics are drawn from the National Database of Compensation-based Statistics (NDS) each year.
<i>Motor Vehicle Accident Compensation (Lump-Sum and Statutory Benefit Schemes)</i>	
<ul style="list-style-type: none"> • Australian Capital Territory Government, Annual Report 2015–16. 2016, ACT Treasury: Canberra, Australia. • Insurance Commission of Western Australia (ICWA), Annual Report 2016. 2016, ICWA: Perth, Western Australia. • Motor Accident Commission (MAC), Annual Report 2015–16. 2016, MAC: Adelaide, South Australia. • Motor Accident Insurance Commission (MAIC), Annual Report 2015–16. 2016, MAIC: Brisbane, Queensland. 	Annual reports from these MVA Compensation lump sum benefit schemes include information regarding system governance, structure and operations, benefits, services, eligibility, and expenditure at varying levels of detail. Annual reports change in detail and format between years, but usually contain sufficient information to describe most of a systems' function.

TABLE 25 ANNOTATED BIBLIOGRAPHY

Documents	Description
<i>Motor Vehicle Accident Compensation (Lump-Sum and Statutory Benefit Schemes)</i>	
Ernst & Young, Review of selected performance indicators of the NSW CTP Scheme. 2017, SIRA: Sydney, Australia.	Ernst & Young (EY)'s review of the NSW lump sum benefit scheme provides detailed coverage and expenditure statistics that also helps to inform other schemes in the MVA Compensation lump sum system
<ul style="list-style-type: none"> • Transport Accident Commission (TAC), 2015/16 Annual Report. 2016, TAC: Melbourne, Victoria. • Motor Accidents Insurance Board (MAIB), Annual Report 2016. 2016, MAIB: Hobart, Tasmania. • Motor Accident (Compensation) Commission (MACC), Motor Accident (Compensation) Commission Annual Report 2015–16. 2016, MACCs: Darwin, Australia. 	Annual reports from these MVA Compensation statutory benefit schemes include information regarding system governance, structure and operations, benefits, services, eligibility, and expenditure at varying levels of detail. Annual reports change in detail and format between years, but usually contain sufficient information to describe most of a systems' functions.
<ul style="list-style-type: none"> • National Injury Insurance Scheme Queensland (NIISQ). Registered providers. 2017 [cited 2017; Available from: https://niis.qld.gov.au/service-providers/registered-providers/]. • Lifetime Support Authority SA, Lifetime Support Authority of South Australia Annual Report 2015–2016. 2016, LSA-SA: Adelaide, Australia. • Life Insurance (Income Protection and Total and Permanent Disability Policies) 	All jurisdictions that contain MVA Compensation lump sum benefit schemes also include statutory catastrophic injury schemes. The NIISQ and Lifetime Support Authority SA annual reports both include information regarding the governance, structure and operations, benefit and service delivery, processes and timing, and coverage and expenditure of CIS systems.
Australian Securities and Investments Commission (ASIC), Report 498: Life Insurance claims: An industry review. 2016, ASIC: Canberra, Australia	ASIC's Report No. 498 provides insight into life insurance industry process, benchmarks, and outcomes. It provides information from de-identified life insurers of varying sizes, including the average claim determination times, proportion of claims from superannuation and ordinary business channels, and reasons for complaints and dispute resolution.
Financial Services Council (FSC), Life Code of Practice. 2016, FSC: Sydney, Australia.	The Life Code of Practice is a source of the rules and guidelines that life insurers are required to meet. It includes detailed information important in describing both recipient eligibility, and the processes and timing associated with life insurance.
RiceWarner, Superannuation: Assessing Competitiveness and Efficiency: Submission to Productivity Commission - Insurance Aspects. 2017, RiceWarner: Sydney, Australia.	This submission to the Productivity Commission also includes an attachment with estimations of life insurance coverage. Along with these estimations are RiceWarner's projections of superannuation value if life insurance policies were removed.
Australian Securities and Investments Commission (ASIC), Report 413: Review of retail life insurance advice. 2014, ASIC: Melbourne, Australia.	ASIC's Report No. 413 provides insight into the structure of life insurance products sold through retail streams.

TABLE 25 ANNOTATED BIBLIOGRAPHY

Documents	Description
<i>Social Security</i>	
Department of Social Services (DSS), Annual Report 2015–16. 2016, DSS: Canberra, Australia	The DSS Annual Report contains summary information valuable in describing structure and operations, and coverage and expenditure, of the social security system. Note: statistics for coverage and expenditure change between annual report years.
Department of Social Services (DSS), DSS Demographic Data June 2016. 2016, DSS: Canberra, Australia	DSS Demographic Data is a statistical summary of DSS's database of social security benefits released quarterly. It contains detailed statistics important in describing the coverage and expenditure of the social security system.
Department of Human Services (DHS), A guide to Australian Government payments, DHS. 2017, Centrelink: Canberra, Australia	This guide provides basic information on the eligibility and benefit amounts available in the social security system. More detailed information can be found in the Guide to Social Security Law
Department of Social Services (DSS). Guide to Social Security Law - Version 1.237. 2017 [cited 2017; Available from: http://guides.dss.gov.au/guide-social-security-law .	The Guide to Social Security Law is a highly detailed website containing the most recent eligibility criteria, benefit delivery, processes and timing, and service delivery information. At the time of writing it was published at Version 1.237 (October, 2017).
<i>Defence and Veterans Affairs Compensation and Disability Pensions</i>	
Department of Veterans Affairs (DVA), Department of Veterans Affairs Annual Report 2015–16. 2016, DVA: Canberra, Australia	The DVA Annual Report contains summary information important in describing structure and operations, processes and timing, and coverage and expenditure in the DVA Compensation and Pensions system.
Department of Veterans Affairs (DVA), Stats at a Glance - September 2016. 2016, DVA: Canberra, Australia.	DVA Stats at glance is a summary of DVA's coverage and expenditure data for the VEA, MRCA, and SRCA, including gold and white cards and is released bi-annually.
Department of Veterans Affairs (DVA). Factsheet MCS01 - Overview of the Safety, Rehabilitation and Compensation Act 1988 (SRCA). 2017 [cited 2017; Available from: https://www.dva.gov.au/factsheet-mcs01-overview-safety-rehabilitation-and-compensation-act-1988-srca .	The SRCA factsheet provides structure and operations, benefit and service delivery, and processes and timing information beyond the detail of the annual report, specific to the SRC Act.
Department of Veterans Affairs (DVA). Factsheet MRC01 - Overview of the Military Rehabilitation and Compensation Act 2004 (MRCA). 2017 [cited 2017; Available from: https://www.dva.gov.au/factsheet-mrc01-overview-military-rehabilitation-and-compensation-act-2004-mrca .	The MRCA factsheet provides structure and operations, benefit and service delivery, and processes and timing information beyond the detail of the annual report, specific to the MRC Act.
Department of Veterans Affairs (DVA). Factsheet MRC43 - Compensation Payment Rates. 2017 [cited 2017; Available from: https://www.dva.gov.au/factsheet-mrc43-compensation-payment-rates .	This DVA factsheet provides information useful for determining benefit rates and eligibility.

TABLE 25 ANNOTATED BIBLIOGRAPHY

Documents	Description
<i>Superannuation</i>	
Australian Prudential Regulatory Authority (APRA), Annual Superannuation Bulletin June 2016. 2017, APRA: Sydney, Australia.	The APRA Superannuation Bulletin includes basic coverage and expenditure statistics for all superannuation funds. Tables 5a and 14c (in the 2016 release) provide information on the number of recipients / expenditure per condition of release.
Australian Prudential Regulatory Authority (APRA), Annual MySuper Statistics. 2017, APRA: Sydney, Australia.	MySuper statistics released by APRA are more detailed but do not include the entire superannuation industry.
Sunsuper, Permanent is No Longer Permanent. 2015, Sunsuper: Melbourne, Australia.	This infographic reports on a small sample (n = 330) study conducted by SunSuper and AIA. It is one a few pieces of research publicly released by the superannuation and life insurance industries, and is often cited by industry experts.

Appendix 6 – Relevant System Legislation

TABLE 26 SYSTEM LEGISLATION

Employee Entitlements

Fair Work Act 2009

Workers' Compensation (Long-Tail Schemes)

ACT	Workers' Compensation Act 1951
Tasmania	Workers' Rehabilitation and Compensation Act 1988
WA	Workers' Compensation and Injury Management Act 1981
Comcare	Safety, Rehabilitation and Compensation Act 1988
Seacare	Seafarers Rehabilitation and Compensation Act 1992

Workers' Compensation (Short-Tail Schemes)

NSW	Workplace Injury Management and Workers Compensation Act 1998 Workers' Compensation Act 1987
NT	Return to Work Act
Queensland	Workers' Compensation and Rehabilitation Act 2003
SA	Return to Work Act 2014 Return to Work Corporation of South Australia Act 1994 South Australian Employment Tribunal Act 2014
VIC	Workplace Injury Rehabilitation and Compensation Act 2013

Motor Vehicle Accident Compensation (Lump-Sum Benefit Schemes)

ACT	Road Transport (Third-Party Insurance) Act 2008
NSW	Motor Accidents Compensation Act 1999 Motor Accidents (Third Party Insurance) Act 1942
QLD	Motor Accident Insurance Act 1994
SA	Motor Accident Commission Act 1992
WA	Insurance Commission of Western Australia Act 1986

TABLE 26 SYSTEM LEGISLATION

Motor Vehicle Accident Compensation (Statutory Benefit Schemes)

ACT (CIS)	Lifetime Care and Support (Catastrophic Injuries) Act 2014 (LTCS Act)
NSW (CIS)	Motor Accidents (Lifetime Care and Support) Act 2006
NT	Motor Accidents (Compensation) Act 1979
QLD (CIS)	National Injury Insurance Scheme (Queensland) Act 2016 National Injury Insurance Scheme (Queensland) Regulation 2016
SA (CIS)	Motor Vehicle Accidents (Lifetime Support Scheme) Act 2013
TAS	Motor Accidents (Liabilities and Compensation) Act 1973 Motor Accidents (Liabilities and Compensation) Regulations 2010
VIC	Transport Accident Act 1986 Transport Accident Regulations 2007
WA (CIS)	Motor Vehicle (Catastrophic Injuries) Act 2016

Life Insurance (Income Protection and Total and Permanent Disability Policies)

Corporations Act and Corporations Regulations
Australian Prudential Regulation Authority Act 1998
Insurance Contracts Act
Life Insurance Act 1995
Superannuation Industry (Supervision) Act 1993
Superannuation Industry (Supervision) Regulations 1994
Superannuation (Resolution of Complaints) Act 1993

Social Security

Social Security Act 1991
Human Services (Centrelink) Act 1997
Human Services (Medicare) Act 1973

Defence and Veterans Affairs Compensation and Disability Pensions

Veterans Entitlements Act (VEA)
Military Rehabilitation and Compensation Act 2004 (MRCA)
Safety, Rehabilitation and Compensation Act 1988 (SRCA)

Superannuation

Superannuation Act 1976
Superannuation Industry (Supervision) Act 1993
Retirement Savings Accounts Act 1997
