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NSW WorkCover

Health, Return to Work, Social and Financial Outcomes associated with different compensation pathways in NSW: Quantitative Survey of Claimants.

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Executive Summary

I Introduction and Aim of the Study

WorkCover commissioned PricewaterhouseCoopers (PwC) to conduct a three phase project to examine the experiences and outcomes of workers on statutory benefits, compared with those receiving lump sum payments as Commutations or Common Law settlements. The aim of the present study was to examine the factors associated with: health outcomes, return to work outcomes, social outcomes and financial outcomes following compensation for work-related injury in NSW. Building on the earlier phases, the present project, phase three, takes up the challenge of developing research specifically designed to address the knowledge gap concerning the impact of features of scheme design and compensation process on outcomes for workers compensated following injury in NSW.

This WorkCover study is ground breaking in the field of workers compensation. It provides a starting point for understanding outcomes associated with various compensation pathways. It is also the first time that such a benchmark has been developed in the history of the NSW scheme (and exists nowhere else nationally that we are aware of).

II Methodology – Strengths and Limitations

The major strengths of this study lie in its approach, design and rigorous methodology. A cross-sectional survey of claimants was undertaken to examine the possible relationships between a range of possible influencing factors and health, return to work, social and financial outcomes**.** In all, 1,021 claimants whose compensation claim had been closed for a minimum of 0 months and a maximum of 5 years were interviewed over the telephone. The interview contained existing standardised and validated questions, where possible, to measure health, return to work, social and financial outcomes as well as claims/rehabilitation experience (see Table I-I below). Potential participants were selected randomly from the WorkCover claims data base from three stratification variables: compensation pathway, severity of injury and time since claim closure (see Figure I-I below). The selection was also made to ensure the representativeness of sample characteristics for each of the twelve stratification groups, based on six key demographic factors: age, gender, occupation, geographic location, claim duration on closure and injury type. Great care was taken with data collection to ensure that ethical requirements were met, that the sample was as inclusive as possible, and that reliable data were collected. A standardised telephone survey method, one of the most common and accepted methods for surveys of this type, was used. In line with well-documented practices for obtaining reliable data with this type of survey, comprehensive quality assurance procedures were part of the method. The data were analysed using standard survey bivariate and multivariate statistical approaches.

Three major limitations influenced the interpretation of the associations reported.

- Firstly this study is cross-sectional so the direction of causation is not clear.
- The second major limitation is recall bias due to the retrospective recall of claims and rehabilitation experience.
- The third major limitation in the study relates to the lack of appropriate measures of injury severity in the claims database. Proxy measures of injury severity based on claim severity were used but the same proxy measures are not consistently available for all pathway types. This limitation prevented direct matching of groups on severity and may have allowed for possible selection bias to the pathway groups. The limitation of the severity measure was addressed by a purposeful sampling strategy to obtain samples with overlapping severity levels and post-hoc analysis was used to examine whether the sampling strategy achieved its aim.

Figure I-I Stratification variables which defined the study population

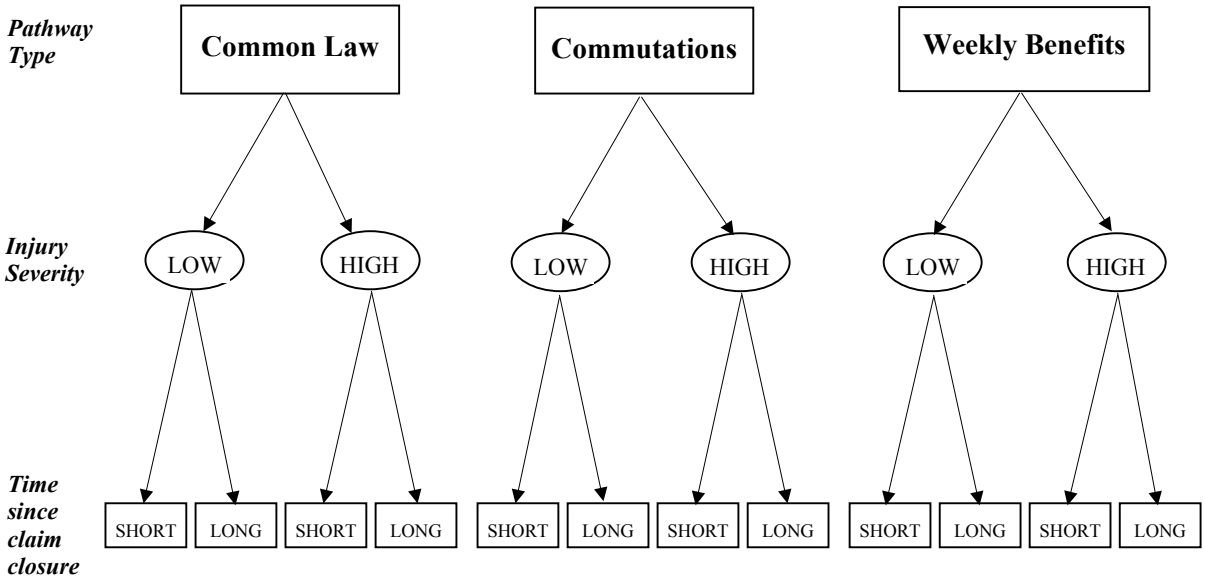


Table I-I Summary of key dimensions measured in the questionnaire

Outcomes:

- ***Health and well-being***: general health, psychological distress, satisfaction with life, pain.
- ***Social:*** social support and participation in social activities.
- ***Financial:*** debt, saving reducing actions.
- ***Return to work:*** return to work rate, durability of return to work, satisfaction with return to work, length time before return to work, job satisfaction. Return to work was defined as a process of getting the claimant back to suitable employment.

Claims and rehabilitation experience:

- Experience/satisfaction with the claims process – defined as the process that the claimant had to go through to claim for compensation.
- Advice – defined as advice received during the compensation process, starting from the time of injury to the time when the claim had closed.
- Knowledge of system – defined as knowledge about how much compensation the claimant was entitled to and the process of filing for compensation.
- Rehabilitation experience – defined as a process of helping the claimant recover from their injury and being returned to suitable employment.

III Overview of Main Results

iii.i Summary of key findings

1) The self-rated health status of this sample of former claimants was poor and varied by compensation pathway. Common Law and Commutations groups were found to have poorer health outcomes than the Weekly Benefits group.

2) Overall, the return to work rate of this sample of former claimants was low. Return to work outcome varied independently by pathway and by injury severity. Weekly Benefits claimants, in general, appeared to have better return to work outcomes than either the Common Law or Commutations groups.

3) There was clear indication of inter-relationships between health, return to work, social and financial outcomes. Poorer health was associated with lower rates of return to work and lower rates of social participation. Lower levels of social contact were associated with reduced financial outcomes.

4) In general, a majority of the sample perceived that the claims and rehabilitation process (compensation claims process, rehabilitation, commitment to return them to work) was not to their satisfaction.

iii.ii Sample and Representativeness

- *Response rate and potential sample bias.* The sample obtained was large enough (1,021) to be able to detect meaningful differences between groups and was representative of the specified strata of the NSW claimant population. There was no evidence of systematic bias in the achieved sample due to non-response or non-contact of the eligible sample. In addition, the response rate was high (35%) for this type of study.

- *Socio-demographic characteristics of the achieved sample.* The three compensation pathway samples were well matched for: age; sex; country of birth; indigenous status; language spoken at home; marital status; highest qualification obtained; and occupation classification. The Weekly Benefit sample reported a higher income and employment rate than both the Common Law and Commutation samples. To take account of the potential influence of these factors on the outcomes, all multivariate analyses were adjusted for a range of factors including income and employment status.

- *Distribution of Severity.* Examination of the distribution of the severity measures indicated that the strategy of intentionally sampling Weekly Benefits participants from the severe end of the spectrum for this pathway was successful. The majority of the group were in receipt of greater than 90 days paid benefits. Moreover, there was clear overlap between the distribution of days paid for the Weekly Benefits participants with the distributions of days paid for the Common Law and Commutation participants. Thus, although not able to be directly matched for severity, overlap was likely in the severity distributions of the three pathway samples allowing credible comparisons to be made between pathways. Nevertheless, the difference in measures means that it is difficult to unambiguously interpret differences in the influence of injury severity by pathway. Any observed trends with respect to pathway-specific differences in the impact of injury severity may reflect, in part, lack of precision in the of severity measurement.

iii.iii Health Outcomes

Health outcomes in this study were assessed using standard measures of general health status (SF-36), psychological distress (Kessler – 10) and pain (Medical Outcomes Study Pain Measures). The table below highlights the main dimension of these standard measures and the spectrum covered by scores for these main dimensions, with scores from the low end of the spectrum indicating poor health status, and scores from the high end of the spectrum indicating good health status. Full details of these measures can be found in Section 2.4 of the report.

Table I-II The Spectrum of Health Status Dimensions

Low scores (poor health status)		**High scores (good health status)**
Extensive limitation in performing basic physical functions such as dressing and bathing due to health	⟷	*No limitations in ability to perform all types of physical function and activity due to health*
Problems with work or other daily activities as a result of physical health	⟷	*No problems with work or other daily activities as a result of physical health*
Experiencing pain which limits activity due to intensity, frequency and/or duration	⟷	*Little or no pain, or limitations due to pain*
Extensive interference with normal social activities due to physical or emotional health	⟷	*Little or no limitations to normal social activities due to physical or emotional health*
Frequent feelings of being tired and worn out	⟷	*Feeling tired and worn out little or none of the time*
Frequent feelings of nervousness, anxiety and/or depression	⟷	*Experiencing feelings nervousness, anxiety and/or depression little or none of the time*
Evaluation of one's own health as being poor and the belief that it is likely to get worse	⟷	*Evaluation of one's own health as very good or excellent*

- The general health status and psychological health of this claimant sample was poor and the health status varied by compensation pathway.

- Self-reported health status did not vary, in general, by injury severity, with an impact seen on only a few health outcomes. Participants with low severity injuries reported better general health and satisfaction with life than those with high severity injuries. The other characteristic of injury, its type, was not found to have any association with health outcome.

- Health status did not vary overly by time since claim closure, with little impact seen in the sample overall or within the three compensation pathways.

- Compensation pathway had a consistent effect across all health outcomes. The Common Law pathway was associated with, on average, greater than double the odds of poor health outcomes compared to the Weekly Benefits pathway. The Commutation pathway was also associated with greater odds of poor health outcomes than the Weekly Benefits pathway, but not as great as that associated with the Common Law pathway. This effect remained unchanged after adjustment for socio-demographic factors (Table 5-1c).

- Dissatisfaction with the claims process and with the rehabilitation experience also increased the odds of poor health outcomes across a range of outcomes. Dissatisfaction with these processes tended to increase the odds of poor outcomes by around one and a half times. This effect remained unchanged after adjustment for socio-demographic factors (Table 5-1c).

- When the other social, financial and return to work outcomes were included in the model, these factors were also associated with health outcomes. Not having had durable return to work was the most influential outcome factor in increasing the odds of poor health outcomes. Although generally less influential than durable return to work, lower rates of social participation also consistently contributed to increased odds of poor health outcomes. While compensation pathway and satisfaction with the claims and rehabilitation experiences remained associated with an increased likelihood of poor health, these factors were less influential in the presence of the other outcomes measures (namely social, financial and return to work outcomes) (Table 5-1b).

- The general health status and psychological health of this claimant sample was poorer than the national average. The health status reported by the WorkCover sample was more similar to that reported by sufferers of other chronic health conditions. However, the health status of the claimant sample was at the poorer end of the range when compared with other groups who are chronically ill or have chronic injuries/disabilities (specifically diabetes, work related and non-work related back injury and general non-specific work related injury).

iii.iv Return to Work Outcomes

Return to work outcomes were measured using standardised items from other sources of research into workers compensation both in NSW and internationally. These items included whether participants had returned to work at all, the length of time taken to return to work and the durability of this return to employment. The survey also assessed whether participants had retuned to the same or different employer and job. Satisfaction with the return to work experience and with the current job were also measured. For a more detailed description of these items see Section 2.4 of the report.

- Two thirds (60%) of the sample reported that they had either not returned to work at all or had only returned for a short period of time since their claim had closed.

- Over half (57%) of those who had returned to work, were at the time of this survey working for a different employer and performing different kinds of duties than at the time of injury.

- Of those who had returned to work, the majority (68%) were either neutral or satisfied with their return to work experience. Almost two thirds reported that their job satisfaction was the same or more compared with their work satisfaction prior to injury. These results suggest that if an injured worker is successfully returned to employment, then the return to work process and the job satisfaction is rated as satisfactory.

- Compensation pathway had a consistent effect across all the return to work outcomes, except for satisfaction with return to work. Common Law and Commutation claimants had much greater odds of having poor return to work outcomes compared with Weekly Benefits claimants. This effect was strongest for durability of return to work where Common Law and Commutation claimants had at least four times the odds of non-durable return to work compared with Weekly Benefits claimants. The impact of compensation pathway remained unchanged after adjustment for socio-demographic factors (Table 5-2c).

- Injury severity had an impact on the majority of return to work outcomes. In general, those with high severity injuries had more adverse return to work outcomes.

- High severity injury and a perceived lack of commitment from all those involved in rehabilitation to return the participant to work, both increased the odds of poor return to work across a range of outcomes. The effect of high injury severity on return to work outcomes remained unchanged after adjustment for socio-demographic factors. While the effect of a perceived lack of commitment from all those involved in rehabilitation to return the injured worker to work remained associated with an increased odds/likelihood of poor return to work outcomes (Table 5-2c).

- Socio-demographic factors, injury type and time since claim closure were not strongly associated with return to work outcomes.

- When the other health, social, and financial outcomes were included in the model, the health outcomes were also associated with return to work outcomes. High levels of psychological distress increased the odds of poor return to work outcomes. The effect of injury severity remained unchanged after the other outcome factors were included in the model. While compensation pathway type and perceived lack of commitment to return to work from all those involved in rehabilitation remained associated with an increased likelihood of poor return to work outcomes,

they were less influential in the presence of the other outcome factors. Even though the effect size was reduced for compensation pathway type it was still the most influential factor associated with poor return to work outcomes (Table 5-2b).

- The rate of return to work and reported quality of working life found in the present study was lower than that reported elsewhere (Pransky et al. 2000 & Campbell et al 2000). The return to work rate reported in this study is lower than the NSW level data reported by Campbell in the Return to Work Monitor (2000). Similarly, Pransky et al (2000) in the USA reported levels of satisfaction with working life after returning to work that were also much higher than those found in the present study. However, when comparing data across different studies it is important to take into account differences in the study samples in terms of selection criteria and sampling strategy, as well as, the method of data collection. The specific differences in findings reported here are likely to reflect, in part, differences in sample frames across the studies. The sample in the present study, intentionally, represented a more severe end of the claim severity spectrum than either of the comparator USA and NSW studies.

iii.v Social Outcomes

Social outcomes were assessed using standardised questions taken from the General Social Survey (2002), developed by the Australian Bureau of Statistics. Questions that were either taken directly, or modified from those used in this survey, assessed participants' network of family and friends, the contact they have with them, and the support they would receive from them in a time of crisis. Participants' involvement in social activities was also measured using a question from the General Social Survey. Further details of these questions can be found in Section 2.4 of the report.

- This sample of claimants were reportedly participating in a range of social activities, had an apparently high rate of social contact with family and friends, and reported that they would have strong support in a time of crisis. The status of this claimant sample on these social outcomes with respect to national population data cannot be determined until the ABS releases the results of the General Social Survey (the source of these outcome measures).

- Compensation pathway, injury severity and time since claim closure had little effect on contact with family and friends, support received in a crisis and participation in social activities.

- The other health, financial and return to work outcome factors had a greater impact on the social outcomes than the claims process and experience factors. Psychological distress, and durability of return to work influenced both social contact and participation. The number of saving reducing actions influenced social contact. Pain frequency influenced the extent of social participation (Table 5-3b).

iii.vi Financial Outcomes

Financial outcomes were assessed using standardised questions taken from the General Social Survey and other relevant research. Questions that were taken from the General Social Survey assessed the types of cash flow problems participants' may have had, the recent actions participants' may have taken which effectively reduced their financial savings and the types of consumer debt participants' may have had. An item used in another, similar survey (Pransky et al, 2000) was used to measure the social and economic consequences of compensation. For this and the other items used to assess financial outcomes, see Section 2.4 of this report.

- Sixty six percent of the sample claimed they were in some form of debt that involved types of cash flow problems and consumer debt, including home loans. Two thirds of the sample reported recently taking at least one type of saving-reducing action. The status of this claimant sample on these financial outcomes with respect to national population data can not be determined until the Australian Bureau of Statistics releases the results of the General Social Survey (from where these outcome measures were obtained).

- Two thirds (60%) of those who reported receiving a lump sum payment for their injury were dissatisfied with this settlement. The majority (67%) of these participants used their lump sum payment to assist with the cost of their daily living (the costs of daily living did not include the following expenses: mortgage payments, loan payments or contributions towards investments, holidays or a personal business).

- Compensation pathway was the most influential factor associated with whether a claimant had taken some form of action resulting in a reduction in savings. Common Law and Commutations pathway types were associated with greater odds of taking some form of action resulting in a reduction in savings compared with the Weekly Benefit pathway. This effect of compensation pathway type remained after adjustment for the influence of socio-demographic factors. Psychological distress and health status had an independent effect on saving reducing actions. (Table 5-4b)

iii.vi Claims and Rehabilitation Experience

- In this study, claimants were asked to give global retrospective ratings on their experience of the worker's compensation claims and rehabilitation processes. Specifically, participants were asked to rate their satisfaction with the claims process, knowledge of the system, satisfaction with the advice received, satisfaction with rehabilitation and perception of commitment by all those involved in rehabilitation to return them to work (for definitions of these terms see Table 1-1).

- In general, a majority of this sample perceived that the process was not to their satisfaction. Only one third of the sample (32%) were satisfied with the compensation claims process. Less than half the sample (40%) were satisfied with their rehabilitation. Only half the sample (53%) felt that there was at least some commitment to return them to work during their rehabilitation.

- Compensation pathway was related to satisfaction with the claims and rehabilitation experience. The Common Law (68%) and Commutation (64%) groups reported more dissatisfaction with the claims and rehabilitation experience than the Weekly Benefit claimants (49%). Neither injury severity nor time since claim closure had any marked impact on reported satisfaction with claims and rehabilitation experience.

- It can be concluded that when this sample of claimants looked back and reflected on their claims and rehabilitation experience they did not perceive that the process was meeting their requirements. The role of recall bias is clearly an issue in interpreting these findings. Specifically, due to the retrospective nature of the reporting of these perceptions it is difficult to disentangle the impact of the subsequent events and experiences after the claim had closed from claimant perceptions of the process at the time of being involved in it.

IV Conclusions

The results of this study revealed compromised health and poor return to work outcomes for claimants in all compensation pathways. Moreover, the outcomes appeared to be poorer for the Common Law and Commutations participants than the Weekly Benefits group. Placing the present results within the international context (USA), it is evident that they are not unique to the environment in NSW.

Balancing the strengths and limitations of this study, it can be concluded that the present study provides an important benchmark. It provides a robust picture of outcomes for claimants in NSW post claim closure, circa 2002/3. This provides a powerful position for analysis and understanding of the impact of future scheme design change and innovation. The study lays the foundation for building the future evidence base in NSW.

1 Introduction

1.1 Project Overview

WorkCover commissioned a three phase project to examine the experiences and outcomes of workers on Weekly Benefits, compared with those receiving lump sum payments as a Commutation or Common Law settlement. As well, the project was concerned with examining the cost to the scheme of the various arrangements. The current piece of work is the third phase of this project.

In the first phase of the project, the main WorkCover claim and payment data bases were analysed. PwC Actuarial produced two reports (PwC, 2001 a;b) for WorkCover. These reports are entitled:

- *"Analysis of trends in NSW workers' compensation commuted claims"*
- *"Analysis of trends in NSW workers' compensation common law claims"*

The key deliverable of these reports was a statistical profile of claimants who received Commutations and Common Law settlements respectively. From this analysis, it was possible to identify the profile of people whose claims were commuted or who had their claims settled through Common Law, compared to those receiving statutory Weekly Benefits.

In the second phase of the project, qualitative methods were used to identify:

- possible motivators for people to seek particular compensation pathways;
- possible experiences of those compensated via Commutations, Common Law or Weekly Benefits;
- possible health, social and financial outcomes associated with different compensation pathways.

In phase 2, a full range of stakeholders were interviewed to secure information about these dimensions (i.e. employers, insurers, lawyers, unions, doctors, other jurisdictions and claimants). The available published literature was also reviewed, to identify previous research findings concerning the outcomes for those receiving different forms of compensation following work-related injury.

Phase 2 identified a range of plausible factors that are likely to be involved in determining compensation pathway selection and claimant outcomes, and warrant further study. This phase of the study found that demographic factors, injury features and aspects of return-to-work are likely to be important determinants of long term outcomes. Features of the claims and

rehabilitation process, including the duration of the process, are also likely to be important. The role of advice, involvement in the legal process and employer behaviour were implicated as important determinants of claimant behaviour and subsequent outcomes. The findings of the second phase of the project are the subject of a report entitled *Health, social and economic outcomes associated with different compensation pathways (*PwC 2002).

Together, phases 1 and 2 of the project provided the basis for the design of the centrepiece of the project: a quantitative survey concerned with examining the factors associated with outcomes for claimants following different compensation benefit pathways. Phase 3, the quantitative survey, is the subject of the present report.

1.2 Background

Our review of the literature indicated that, overall, there is reasonable evidence that those people who are injured and claim for any type of compensation for that injury, have poorer health outcomes than those who suffer similar injuries but do not become involved in the compensation process. This is true for both work-related and non-work-related injuries. There is almost universal agreement that a complex network of factors is likely to be responsible for these poorer outcomes.

The review of the literature also revealed that there are critical gaps in the evidence base. One major gap identified is that little is known of injured worker outcomes other than return to work and health. The outcome about which the most is known is return to work, but even here, the evidence is usually concerned with return to work immediately after receipt of weekly benefits. Little is known about the success or durability of the return to work outcome. While the health domain has been widely studied, the evidence is far from comprehensive across the spectrum of health-related outcomes. Moreover, there is little research documenting longer term outcomes, in general. Very little research beyond the anecdotal exists concerning financial and social outcomes.

Another critical gap relates to the lack of evidence about the key features of compensation design or compensation pathway which might be likely to impact on outcomes. Moreover what little research does exist is largely international research, and its direct generalisability to Australia, let alone a particular state in Australia, is certainly arguable.

Finally there is a dramatic absence of analytical research examining how the factors associated with claimant outcomes might have their impact. There is agreement in the literature that there are likely to be complex inter-relationships among factors, and that studies need to be designed which are able to determine how and why poorer outcomes occur.

To some extent, the gaps in the research reflect that much of the research to date has often been opportunistic. Routine data (eg. claims data), have been used as the basis for much of the research. These lines of research have provided an important starting point for understanding who has what outcome, however they lack analytical power for identifying outcomes comprehensively or identifying determinants of outcomes. This is not the purpose of such data.

Addressing the gaps in research is critical, if a viable evidence base is to be established for future scheme design and policy decisions. Without understanding the determinants of poor health outcomes, for example, it is not possible to reliably develop strategies to improve the outcomes. Purpose-specific research designed to evaluate outcomes of those compensated following work-related injury, and to understand the possible determinants of outcomes, is needed.

The present project takes up the challenge of developing research specifically designed to begin to address the knowledge gap concerning the impact of features of scheme design and process on outcomes for workers compensated following injury in NSW. A cross-sectional survey was undertaken to investigate the characteristics of an appropriately sampled group of claimants in order to examine the possible relationships between a range of hypothesised factors and compensation outcomes, with factors included in the study based on the findings of phases 1 and 2 of the project. This type of study is extremely valuable as a first line of exploratory research for assessing associates of various compensation outcomes. While cross-sectional data do not provide clear-cut evidence of cause and effect relationships, they are a critical first step in identifying key factors associated with the increased likelihood of poor outcome in a population. The claimant survey reported here provides the essential starting point for understanding outcomes associated with compensation pathways.

1.3 Aims and Hypotheses

Aim

To examine the factors associated with health, return to work, social and financial outcomes following compensation for work-related injury in NSW.

Hypotheses

Three categories of hypotheses underpin the examination of outcomes following compensation for work-related injury in NSW: (1) hypotheses describing the distribution of outcomes; (2) hypotheses concerning factors that may influence outcomes which relate to individual demographic and injury characteristics; and, (3) hypotheses concerning factors that may influence outcomes which relate to processes within compensation.

These hypotheses are specified below.

1. Distribution of outcomes

a) Health, return to work, social and financial outcomes

Outcomes in the four main domains of health, return to work, social and financial outcomes, will vary by pathway.

Outcomes in each domain will modify outcomes in the other domains.

2. Influencing factors – individual

a) The influence of demographic factors

Outcome will vary by demographic factors such as age, gender, occupation and geographic location.

b) The influence of injury severity

Outcomes for those with injuries of differing severity will vary, and these differences will reflect the influence of factors other than anatomical severity.

c) The influence of injury type

Outcomes for those with injuries of differing type will vary.

d) The influence of time since claim closure

Short term time since claim closure (0-2 years post claim closure) and long term time since claim closure (2-5 years post claim closure) will have an differential impact on outcomes for those following different compensation pathways.

3. Influencing factors - process

a) The influence of experience with claims process

Experience/satisfaction with the claims process will vary by pathway.

Experience/satisfaction with the claims process will modify outcomes.

Duration of claim (to closure) will modify outcomes.

b) The influence of advice about claim

Advice sought and obtained about claim will vary by pathway.

Advice sought and obtained about claim will modify outcomes.

c) The influence of knowledge about the compensation system

Knowledge of the system will vary by pathway.

Knowledge of the system will modify outcomes.

d) The influence of rehabilitation experience

Rehabilitation experience will vary by pathway.

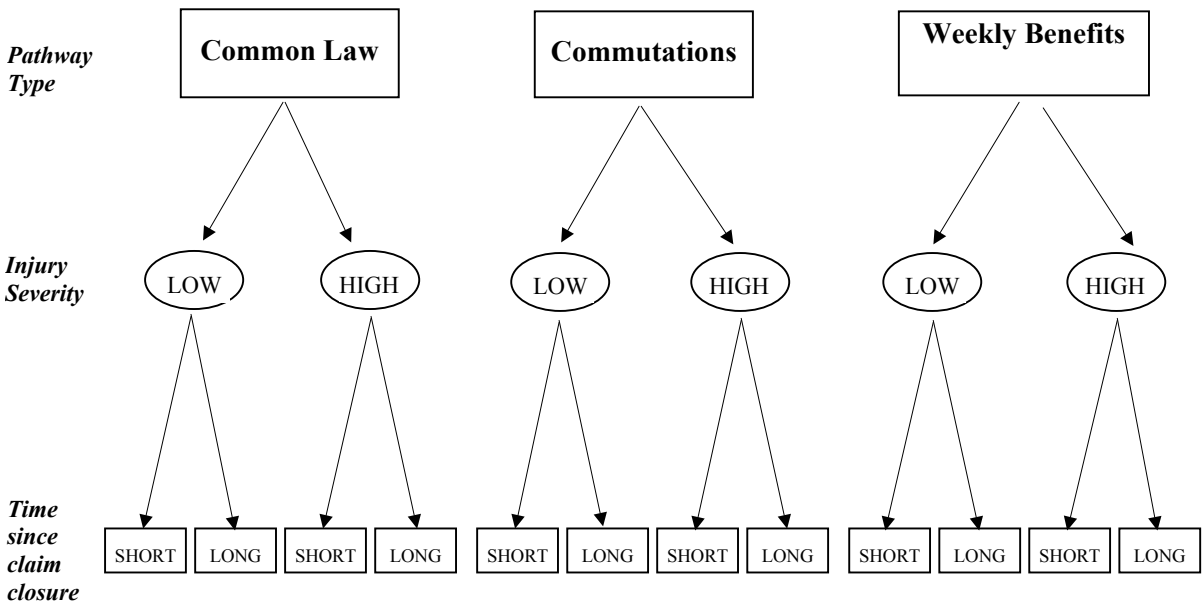
Rehabilitation experience will modify outcomes.

2 Methods

2.1 Design

A cross-sectional survey of claimants was undertaken to examine the possible relationships between the hypothesised factors and health, return to work, social and financial outcomes. Telephone interviews were conducted with 1,021 claimants whose claims had been closed for a minimum of 0 months and a maximum of 5 years (injuries had been incurred up to 16 years prior to the survey). The interview contained existing standardised and validated questions (where possible) to measure health and well-being, return to work, social and financial outcomes as well as claims/rehabilitation experience. Potential participants were selected randomly from the WorkCover claims data base using three stratification variables: compensation pathway type, severity of injury and time since claim closure (see Figure 2-1). The selection was also made to ensure the representativeness of sample characteristics for each of the twelve stratification groups, based on six key demographic factors: age, gender, occupation, geographic location, claim duration on closure and injury type.

Figure 2-1 Stratification variables which defined the study population to produce 12 groups



2.2 Compensation pathways included in the study

There are three compensation pathways which can be followed by seriously injured workers in the NSW Scheme. The three pathways are:

- remain on weekly benefits;
- negotiate a commutation lump sum; or
- receive a common law lump sum through litigation.

Weekly Benefits

This pathway refers to a statutory amount of money that an injured worker is entitled to receive per week. The amount of compensation paid depends on whether the injured worker is totally or partially incapacitated and the degree of ongoing incapacity. Depending on the severity and nature of the injury, claimants predominately compensated through weekly benefits may also receive a statutory lump sum payment which is neither litigated nor negotiated.

Commutations

A commutation is an agreement between an injured worker and the insurer where the worker gives up all future rights in respect of his/her workers' compensation claim (for that injury) in exchange for a lump sum payment. If the insurer and worker agree on a lump sum, the worker's lawyer will lodge the application in the Compensation Court for its determination. The court has to be satisfied that:

- the termination of liability is in the best interests of the worker; and
- the worker fully understands the effect of the termination of liability and has received adequate advice in relation to the consequences of termination.

Common Law

Refers to the extinguishing of the right to further compensation via receiving a common law lump sum. These claims for compensation involve some aspect of negligence on the part of the employer and are settled through litigation.

2.2.1 Impact of the 2001 Reforms on compensation pathways in NSW

The volume of commuted claims increased dramatically following the introduction of the 1998 Act, which liberalised the approval process for obtaining a commutation. Concern as to the effectiveness of commutations in achieving their objectives resulted in reforms in 2001 which imposed

significant tightening in the criteria to obtain a commutation. As a result of the 2001 Reforms restricting access to commutations, actuarial projections predict that the volume of outstanding commutations will decline rapidly (PwC 2002).

In recent years, there has also been an escalation in the number of claims entering the common law process and obtaining common law benefits. As a result, the NSW Government in 2001 established the Sheahan Inquiry to provide recommendations as to how common law should operate in NSW Workers Compensation.

The main recommendations of the Sheahan Inquiry were accepted by the Government and included in the 2001 Reforms. As a result of the 2001 Reforms, actuarial projections predict that the number of new common law intimations will significantly decrease. Overall, the level of lump sum payouts is not expected to change substantially however. While some aspects of the Reforms should contribute to a reduction in the average settlement size of new common law claims, the impact of these factors will be offset to an extent in that the distribution of new common law settlements will become considerably more skewed towards more severely injured claimants with larger average settlements (PwC 2002).

2.3 Sample and Sample Selection

Sampling was performed based on two types of selection:

1. selection by stratification variables; and
2. selection by key representative demographic characteristic variables.

Each will be discussed in turn below.

2.3.1 Selection by Stratification Variables

This form of selection divides the sample into three distinct groups. The stratification variables used for the three groupings are presented in the table below. The definition and classification cut-points for each are described in turn below.

Table 2-1 Stratification variables selected

Stratification variables	Categories
Pathway type	Common Law, Commutation, Weekly Benefits
Injury severity	High, Low
Time since claim closure	Long, Short

2.3.1.1 Pathway

The three categories for pathway were defined from the data in the WorkCover claims data base as follows:

- Claims having total Common Law payments of greater than $20,000 were grouped as Common Law.
- Claims not already grouped as Common Law and having total Commutations payments of greater than zero were grouped as Commutations.
- Claims not already classified as Common Law or Commutations and having total Weekly Benefit payments greater than zero were grouped as Weekly Benefits. As noted previously the Weekly Benefits group, while predominately compensated through periodic payments may also have received statutory lump sums (neither negotiated or litigated).

2.3.1.2 Injury severity

The intent of specifying severity was to consider the impact of the seriousness of the injury on claimant outcome. However, there are no true measures of injury severity in the claims data. Moreover, there are no measures consistently available across all pathways. Instead, two measures based on claim severity available in the data base were used as proxy measures of severity.

Common Law and Commutation cases

For the Common Law and Commutation cases the severity measure used was:

Severity = Max(Section 66 Case Estimate) / (Statutory Maximum), expressed as a percentage.

In theory, this measure of severity should not exceed 100% however, some claimants have multiple injuries for which the case estimate is the total of these injuries and hence the severity measure can be greater than 100%. This does not pose a problem when stratifying the data by level of claim severity as any claim with a severity measure greater than 100% will ultimately be grouped in the high severity category.

The cut off points for the severity groupings are presented in Table 2-2.

Table 2-2 Cut-offs for severity and time since claim closure in the Common Law and Commutation groups*

Pathway type	SEVERITY	TIME SINCE CLAIM CLOSURE	Cut off Max (Section 66 Case Est)/(Stat Maximum)
Common Law	Low	Short	<7.5%
		Long	<7.9%
	High	Short	>17.5%
		Long	>18.8%
Commutation	Low	Short	<11.0%
		Long	<10.5%
	High	Short	>19.1%
		Long	>18.2%

** Compensation pathway type coded as common law or commutations in the WorkCover claims data base*

We selected the cut points empirically from the study population strata. Due to the definition of the cohort and the associated requirement for time since claim closure, all claimants in this sample had incurred their compensable injury up to a maximum of 16 years prior to the survey. The empirical cut off points in each case were 35% and 65% such that the low severity group for each of the 4 categories (based on pathway and time since closure), was the lowest 35% of claims and the high severity group was the highest 35% of claims, based on the Section 66 severity measure. Potential participants were randomly sampled from the categories defined by the cut off points.

Further analysis on the validity and comparability of the severity measures used was carried out. For this analysis of the severity of these Common Law and Commutation groups, number of days for which weekly benefits was paid as the criterion for severity of claim was examined so that it could be compared to the Weekly Benefits group for detailed analysis (See Section 4 of this report).

Weekly Benefits cases

For Weekly Benefits cases, the severity measure could not be the same as for Commutation and Common Law cases because the Section 66 Case Estimates are in general not as available for Weekly Benefit cases. Instead, number of days for which weekly benefits were paid was selected as the criterion for severity of claim because it is a sensitive indicator of claim severity for this pathway type (See Section 3.3 of this report). A reasonably high minimum severity threshold was intentionally set for the Weekly Benefits group. By setting the minimum threshold at such a high level, all Weekly Benefits participants, including the so-called low severity group,

were sampled from the more severe end of the severity spectrum for this pathway. One potential consequence of this sampling strategy was that Weekly Benefits participants, who also received a lump sum, were likely to be over-sampled (statutory lump sums are more common at the more severe end of the spectrum). For Weekly Benefits severity was defined as follows:

Severity = Number of days for which weekly benefits were paid

The Weekly Benefits cut off points for the severity groupings is presented below.

Table 2-3 Cut-offs for severity and time since claim closure in the Weekly Benefits group

Pathway type	SEVERITY	TIME SINCE CLAIM CLOSURE	Cut off (days)
Weekly Benefits	Low	Short	>63 and <95
		Long	<101
	High	Short	>170
		Long	>197

Again, these cut points were selected empirically with the low severity representing the lowest 35% of claims and the high severity group representing the highest 35% of claims, based on the weekly days paid severity measure.

For the target sample frame, all three groups of participants by pathway had the same number of both low and high injury severity. The final distribution of the sample for each pathway on the injury severity measures is provided in Section 4 of this report. A further analysis on other proxy measures of severity has also been included in Section 4 of this report.

2.3.1.3 Time since claim closure

Two groups of claimants were recruited in each severity category for each pathway:

- 'short-term time since closure' claimants were those who have had their claims closed between 0-12 months
- 'long- term time since closure' claimants were those who have had their claims closed between 2 and 4 years ago.

It should be noted that this categorisation needed to be slightly varied for the Common Law pathway to achieve the required sample (see Section 3 for details).

The rationale for including time since claim closure was as a proxy for follow-up in a cross-sectional survey. By stratifying the sample by time since claim closure, we could examine the impact of time within two sub-groups of the same sample (see Section 1.3 aims and hypotheses).

2.3.2 Selection by Representative Demographic Characteristic Variables (within each stratification strata)

Only the first two stratification variables, pathway and injury severity, were used for the purposes of identifying the distribution of demographic characteristics. It was not expected that demographic characteristics would vary substantially by time since closure. The description of the sample within each of the resulting 6 strata (Common Law – low severity, Common Law – high severity, Commutations – low severity, Commutations – high severity, Weekly Benefits – low severity, Weekly Benefits – high severity) was based on being representative of 6 key demographic factors. These factors are:

1. age at injury
2. gender
3. geographical location
4. occupational class
5. claim duration at closure
6. injury type

The complete sample of respondents were randomly selected to ultimately resemble the population of claimants in each of the 12 study strata with respect to the distribution of these 6 characteristic variables. This was in order to ensure there was no systematic sampling bias. Firstly, the distribution of each of these characteristics within the WorkCover claims data base was determined for each of the strata. Secondly, targets were then set for the survey sample to make sure that the selection of the random sample was representative of the population for each of the strata. Thirdly, it was necessary to monitor survey uptake against the sample frame during the data collection phase of the project to avoid response bias and to ensure that targets were being met as much as practically possible. This process ensured that the final sample of respondents was representative of sample frame characteristics of the population for each strata.

The distribution of the 6 characteristic variables was described in terms of the following groupings:

Age at Injury

Age at injury was divided into three roughly equal groups resulting in the given cut points:

- < 30 years;
- 30-44 years; and
- 45+ years.

Gender

- Male
- Female

Geographical location

Geographical location was classified into three groups:

- Capital – Sydney and the greater metropolitan.
- Regional – Regional Centres (e.g. Newcastle, Wollongong).
- Rural – All other areas.

Occupational classification

The occupational classification used was based on the 1 digit Australian Standard Classification of Occupations (ASCO) code which was grouped into the following two categories:

- claimants where the ASCO code began with 1, 2, 3, 5, 6, or 8 were grouped into a professional and clerical category; and
- claimants with ASCO beginning with 4, 7, or 9 were grouped into a trades, labour and related classifications category.

Claim duration at closure

Target groupings for claim duration at closure were determined to avoid a bias in responses towards shorter duration claims.

Due to the three different types of pathways, that by their nature vary in length of claim duration, different claim duration groupings were likely to be required for Common Law and Commutation cases versus Weekly Benefits cases.

For Common Law and Commutations claims it was felt that the distribution of claim duration was sufficiently similar in the WorkCover claims data base to use the same group cut-offs. These were:

- < 3 yrs;
- 3 to 5 years; and
- 5+ years.

As expected, the duration distribution for the Weekly Benefits pathway was significantly different to the Common Law and Commutations pathways. The following groupings, which more accurately describe the Weekly Benefits pathway population, were used:

- < 80 weeks;
- 80 – 200 weeks; and
- 200 + weeks.

Injury type

Given the predominance of sprain/strain injuries in the claimant sample, injury type was also a characteristic variable that we sought to adequately represent in the sample. To avoid any sampling bias with respect to the injury type of claimants, two groupings of injury type were described and their distributional characteristics included in the sample frame. These were:

- sprain/strain injuries, and
- other injuries.

Table 2-4 presents the breakdown of the target distribution for the characteristic variables derived from the WorkCover claims data base for each of the population strata.

Table 2-4 Distribution of the target sample derived from WorkCover claims data base

	Payment Type	Common Law				Commutations				Weekly Benefits			
	Severity	Low		High		Low		High		Low		High	
	Time Since Closure	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long
		Target	Target	Target	Target	Target	Target	Target	Target	Target	Target	Target	Target
Age at Injury (years)	<30	27%	27%	27%	27%	23%	23%	18%	18%	30%	30%	25%	25%
	30 to 44	44%	44%	46%	46%	43%	43%	42%	42%	38%	38%	38%	38%
	45+	30%	30%	27%	27%	35%	35%	39%	39%	32%	32%	37%	37%
Gender	Female	23%	23%	19%	19%	38%	38%	32%	32%	27%	27%	32%	32%
	Male	77%	77%	82%	82%	62%	62%	68%	68%	73%	73%	68%	68%
Geographical Location	Capital	44%	44%	43%	43%	44%	44%	42%	42%	52%	52%	48%	48%
	Regional	18%	18%	15%	15%	17%	17%	17%	17%	16%	16%	17%	17%
	Rural	38%	38%	42%	42%	38%	38%	41%	41%	32%	32%	35%	35%
Occupation Class. (ASCO)	Professional and Clerical Classification	64%	64%	53%	53%	69%	69%	63%	63%	62%	62%	64%	64%
	Trades, Labour and Related Classifications	36%	36%	47%	47%	31%	31%	37%	37%	38%	38%	36%	36%
Claim Duration at Closure (wks)	<80	-	-	-	-	-	-	-	-	43%	43%	12%	12%
	80 to 200	-	-	-	-	-	-	-	-	38%	38%	39%	39%
	200+	-	-	-	-	-	-	-	-	19%	19%	50%	50%
	<3 yrs	25%	25%	14%	14%	31%	31%	17%	17%	-	-	-	-
	3 to 5 yrs	48%	48%	50%	50%	36%	36%	33%	33%	-	-	-	-
	5+ yrs	27%	27%	35%	35%	33%	33%	50%	50%	-	-	-	-
Injury type	Sprain/Strain	49%	49%	51%	51%	57%	57%	63%	63%	47%	47%	47%	47%
	Other	51%	51%	49%	49%	43%	43%	37%	37%	53%	53%	53%	53%

It must be noted that the data upon which these variables were determined vary in quality in the WorkCover claims data base. The variables: ‘ age at injury’, ‘ gender’ and ‘claim duration’ are considered to be robust. The variables: ‘geographical location’, ‘occupation classification’ and ‘injury type’ are considered to be somewhat robust, based on a small amount of miss-code and missing values. (Statistical Case Estimation Model Data Description and Validation, PricewaterhouseCoopers, 2003).

The extent to which the sample frame targets for stratification variables and sample characteristic variables were achieved in the survey sample will be reported in full in Section 3 of this report.

2.3.3 Sample exclusions

Only three exclusion criteria were applied in this study. First, in line with ethical guidelines, claimants who had been approached in phase 2 and had refused were excluded from sampling. Second, claimants who had participated in phase 2 were excluded. Finally claimants whose record showed that an interpreter was required were excluded from sampling because it was felt that it would be unlikely that they could participate fairly and equally in this survey due to anticipated language difficulties. Those claimants requiring an interpreter only constitute a very small portion of the whole claimant sample (approximately 2%). Our achieved sample had representative proportion of claimants who were born overseas (20%) and spoke a language other than English at home (14%). To examine the impact of the compensation pathways on the outcomes of claimants who require an interpreter a separate study would have been required.

2.3.4 Sample Procedure – Initial selection/Extensions/Variations

Figure 2-2 below describes the sample selection procedure moving through the steps of selecting claimants from the WorkCover data base, the telephone matching and letters being sent out to claimants, to the telephone invitation to take part in the survey.

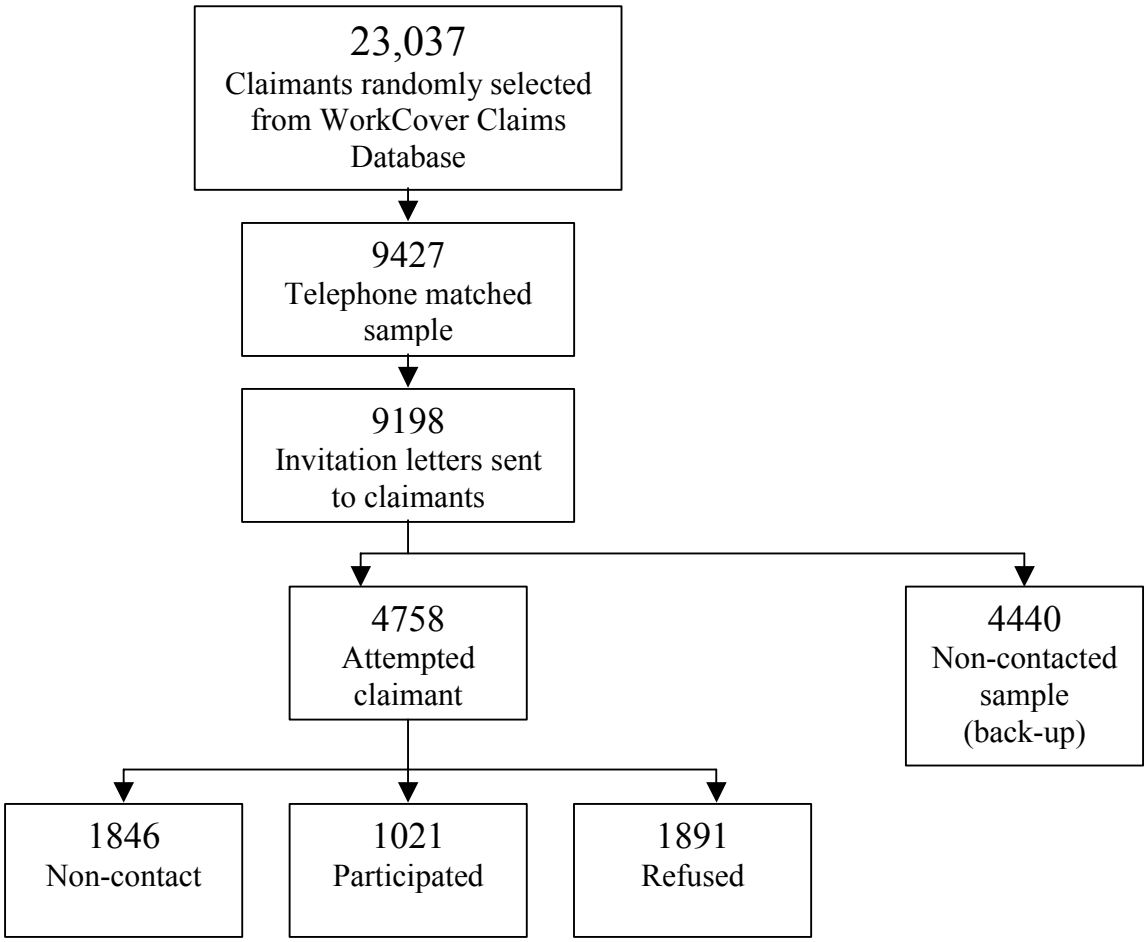
Out of about 50,000 claimants in the WorkCover data base, 23,037 potential claimants that met the stratification and sampling criteria were randomly selected from within the population strata. These 23,037 were selected on the basis that residential address details were contained in the WorkCover claims data base (Note: these 23,037 also included those cases required for sample extension, described below).

With these details it was possible to attempt to match these claimants to telephone numbers. It must be noted that the hit rate for telephone matching was 41% for the whole sample and ranged from 37-47% by the twelve groups (see Table 2-5 below for match rate by 12 groups). The match rate was low due to incomplete or erroneous addresses and also because of the mobility of the claimant sample. This matching process was slightly more successful for Weekly Benefit claimants compared with Commutations and Common Law claimants.

Table 2-5 The percentage of sample for which telephone matching was successful by the twelve study groups

Pathway	Time Since Closure	Severity	Total
Common Law	Short	Low	39%
Common Law	Short	High	37%
Common Law	Long	Low	36%
Common Law	Long	High	41%
Commutations	Short	Low	38%
Commutations	Short	High	42%
Commutations	Long	Low	37%
Commutations	Long	High	40%
Weekly Benefits	Short	Low	42%
Weekly Benefits	Short	High	47%
Weekly Benefits	Long	Low	43%
Weekly Benefits	Long	High	43%

Figure 2-2 Overview of sampling procedure and achieved sample



Sample for selection: extension sample for Common Law cases

Initial matching efforts were sufficiently low for all groups within the potential sample such that the total number of respondents required would not be achievable. For the Commutations and Weekly Benefits pathways, a large enough pool of claimants were available in each of the stratified groupings to allow a larger sample to be drawn. In all, 1,500 additional claims in each of the 8 groups were drawn using the pre-set stratification and sampling criteria variables defined for the study.

For Common Law cases, potential additional participants for the survey also needed to be identified from the WorkCover claims data base. Given the distribution of claims in the system, the pool of eligible participants available in the data base for the Common Law pathway was smaller at the outset, and had already been exhausted in the drawing of the original sample. In order to achieve the target sample size and distribution, the cut-offs described above for time since claim closure were changed to the following:

- Short duration was changed from 0 – 12 months to 0 – 24 months.
- Long duration since closure was changed from 24 – 48 months to 24 – 60 months.

Revising the cut offs for time since claim closure allowed us to draw upon cases within the 1 – 2 year period and the 4 –5 year period that were not included in the first instance. The window for sampling was extended at the upper and lower bounds because it was felt that the upper limit of 5 years since claim closure should not be exceeded due to increased potential for problems with recall bias for the claims process after more than 5 years had elapsed.

Further, we revised the cut-offs for injury severity for the Common Law claimants from 35% of claimants being above and below the cut off point, to 50% of claimants being above and below the cut off point, as illustrated in Table 2-6 below.

Table 2-6 Revised cut-offs for injury severity for the Common Law group

Pathway type	Severity	TIME SINCE CLOSURE	Initial sample Cut off Sec-66	Extension sample Cut off Sec.66
Common Law	Low	short	<7.5%	<12.7%
		long	<7.9%	<14.4%
	High	short	>17.5%	>12.7%
		long	>18.8%	>14.4%

Sample for selection: Further Common Law sample extension

After data collection was completed, we carefully examined our response rate (see Section 3.1 in this report) and concluded that the achieved rate could be improved for two groups of the Common Law claimants. These groups were: "Common Law, high severity long time since closure" and "Common Law, low severity, long time since closure". Fortunately there was some sample that was selected (N=553) but not used in the data collection and could be approached for invitation to take part in the survey.

We collected data from a further 21 Common Law claimants, improving the response rate for "Common Law, high severity long time since closure" from 58% to 76%, and "Common Law, low severity, long time since closure" from 53% to 60%. All 1,021 participants were included for the purposes of analysis.

Test –retest of the Short Form – 36 (SF-36)

An error occurred in the way the SF-36 was administered in the initial survey of 1000 claimants. One response option for the 'mental health and well-being' and 'vitality' subscales was omitted. To rectify this error we re-surveyed 610 claimants with the entire (corrected) SF-36. The re-surveyed claimants were evenly distributed across the cells of the sample frame (see Appendix 1 for detailed comparison). This allowed us to gather correct scores for all sub-scales of the SF-36 in a representative majority sub-sample of the study sample. In addition it allowed us to be able to compare the SF-36 with this population after a 1 – 2 month interval following initial administration (see Appendix 1 for detailed SF-36 analysis).

The results suggest that the SF-36 produces stable aggregate sub-scale results in this population across short periods of time. Accordingly, the SF-36 samples are described and used in the analysis as follows:

- Time 1 SF-36 refers to the 1000 claimants surveyed with the SF-36 in the first instance.
- Time 2 SF-36 refers to the data for the 610 claimants surveyed with the correct SF-36 (the sample size for those who received the correct SF-36 was boosted by 21 cases to ensure adequate sample coverage of the Common Law group).

2.4 Survey Instrument

The questionnaire was designed to include a comprehensive range of outcome measures and information to measure the claims and rehabilitation experience of claimants (see Table 2-7). The dimensions of the questionnaire were selected based on a thorough review of studies of outcomes in work-related injuries as conducted during the second phase of this research (see PwC, 2002).

Table 2-7 Summary of dimensions measured in the questionnaire

Outcomes:

- ***Health and well-being***: general health (SF-36), psychological distress (Kessler 10), satisfaction with life (Satisfaction With Life Scale), pain (Medical Outcomes Study pain measure).
- ***Social:*** social support and participation in social activities (General Social Survey,2002).
- ***Financial:*** debt, savings reducing actions (ie dissavings) (General Social Survey,2002).
- ***Return to work:*** return to work rate, durability of return to work, satisfaction with return to work, length of time before return to work, job satisfaction (Campbell, 2000; Pransky et al, 2000). Return to work was defined as a process of getting the claimant back to suitable employment.

Claims and rehabilitation experience:

- Experience/satisfaction with the claims process – defined as the process that the claimant had to go through to claim for compensation.
- Advice – defined as advice received during the compensation process, starting from the time of injury to the time when the claim had closed.
- Knowledge of system – defined as knowledge about how much compensation the claimant was entitled to and the process of filing for compensation.
- Rehabilitation experience – defined as a process of helping the claimant recover from their injury and being returned to suitable employment.

2.4.1 Interview design

The influence that certain questions may have had on the responses to other sections was also considered. The claims and rehabilitation questions were placed after the outcomes so that these issues would be less likely to influence outcomes. Questions that assessed the financial characteristics were placed at the end of the questionnaire as it was believed that these were the most sensitive questions of all the outcomes assessed.

Owing to time constraints for the interview, it was attempted to keep the interview short enough in order to enable the majority of claimants to complete it without feeling overburdened. The length of the questionnaire was ascertained through a process of piloting and revision with the final version running for approximately 30 –35 minutes.

It is important to note when interpreting the results of this survey, particularly those related to participant's claims and rehabilitation experience, that responses provided are the perceptions held by those who were exposed to the compensation system and the processes within it.

Rationale and justification for outcome measures

Wherever possible, existing standardised and validated questions were used to measure health and well-being, social, and financial outcomes. Standard scales were used in order to increase the overall reliability, validity and comparability of the data. Return to work and claims process and rehabilitation experience questions were developed internally on the basis of previous studies (eg, Pransky, Benjamin, Hill-Fotouhi, Himmelstein, Fletcher, Katz & Johnson, 2000; Campbell, 2000).

The rationale and justification for measuring the chosen outcomes are set out below. The psychometric descriptions of the scales, scoring and questions used are also set out below (details on categorical classification of these variables for multivariate analysis can be found in Table 2-9).

During the questionnaire selection phase we considered the following criteria:

- Existing standardised instruments (eg. SF-36, Kessler-10) that have been tested for:
    1. Validity
    2. Reliability
    3. Responsiveness
- Norms available for benchmarking (eg, SF-36 state and national levels and for comparable populations).
- Previous use in Australian setting and in compensation and related areas (eg Pransky et al, 2000).

2.4.1.1 Health and Wellbeing

The Short-Form – 36 Health Survey (Rand Corporation and John E. Ware, 1990)

The SF-36 was designed as a generic indicator of health status for use in population surveys. The survey is composed of multi-item scales to measure the following eight dimensions:

- physical functioning;
- role limitations due to physical problems;
- bodily pain;
- social functioning;
- general mental health covering psychological distress and wellbeing;
- role limitations due to emotional problems;
- vitality (energy – fatigue); and
- general health perceptions.

It can also be divided into two aggregate summary measures: the Physical Component Summary (PCS) and the Mental Component Summary (MCS).

The SF-36 may be self-administered or used in personal or telephone interviews. Using a telephone interview, the questions generally take five to 10 minutes to complete.

The survey has been shown to have adequate test-retest reliability and strong internal consistency. The SF-36 has also been shown to have an adequate level of discriminatory power, adequate correlation with other measures, strong construct validity and adequate criterion validity (For references see Ware, Kosinski & Gandek, 2002)

General population-based, normative data for the SF-36 are available for US and UK populations. Norms for the Australian population are also available from the Australian Bureau of Statistics (1995). The current project secured and used these norms and they are presented for various population groups, defined by demographic, socio-economic and health characteristics.

Scoring and description of variables entered into analysis:

The SF-36 items and scales were constructed using the likert method of summated ratings. The SF-36 was scored in accordance with the SF-36 user manual (Ware, et al 2002)) to produce the following sub-scales: physical functioning, role physical, bodily pain, general health, vitality, social functioning, role emotional, mental health. These scores were created by

summing all items within each scale in order to calculate raw scale scores. These scores were then transformed using the formula provided in the SF-36 Users Manual & Interpretation Guide (2002). All transformed sub-scale scores ranged from 0 – 100. The SF-1, a single item measure of general health, ranged from 1 – 5. We selected the SF1 because it is widely used in routine health surveys. Summary scores have also been reported for the Physical Component Score (PCS) and Mental Component Score (MCS). We selected the PCS and MCS because they combine all the sub-scales into two meaningful norm based dimensions. Norm-based scoring for the Physical and Mental Component Scores involved three steps. First, the eight SF-36 scales were standardised using means and standard deviations from the 2001 general Australian population (National Health Survey, 2001). Second, these scales were aggregated using weights (factor coefficients) from the 2001 general Australian population. Finally, aggregate PCS and MCS scores were standardised using a linear T-score transformation to have a mean of 50 and a standard deviation of 10.

The Medical Outcomes Study Pain Measures (Sherbourne, 1992)

The Medical Outcomes Study Pain Measures cover severity in terms of the intensity, frequency, and duration of pain and captures the impact of pain on behaviour and moods. For the purpose of this survey we selected the duration and frequency of pain items. While the SF-36 includes a pain subscale, it does not include a full range of severity measures with respect to pain. Further, it is also most common to use the bodily pain scale of the SF-36 as part of the summary score for physical health (i.e. PCS) rather than on its own.

Scoring and description of variables entered into analysis:

Scoring of the two questions produced two scores: frequency and duration of pain. Higher scores indicate more pain. Total scores were further categorised into 3 groups for each of the two items. For pain frequency, the three groups were: (1) not very often (combining: 'once or twice' and 'a few times'), (2) fairly often ('fairly often') and (3) very often (combining: 'very often' and 'every day' or almost every day'). For pain duration, the three groups were: (1) less than an hour (combining: 'a few minutes' and 'several minutes to an hour'), (2) several hours ('several hours') and (3) more than a day (combining: 'a day or two' and 'more than two days').

Kessler - 10

The Kessler – 10 (K10) is a 10-item questionnaire intended to yield a global measure of "psychological distress" based on questions about the level of anxiety and depressive symptoms in the most recent four-week period. The questionnaire takes approximately five minutes to complete and can be self-administered or used via telephone interview. A score of one deviation above the mean has been found to be a useful level for further analysis. It classifies about the same proportion of males and females as having high levels of psychological distress as the percentage found to meet diagnostic criteria for

anxiety and depression in other population studies (Clinical Research Unit for Anxiety and Depression, UNSW). The questionnaire has been validated against concurrent diagnostic data in the Australian National Survey of Mental Health and Wellbeing. The K10 was used in the 1998 Australian National Mental Health Survey and the NSW Health Surveys. Population norms are available and have been secured for the purpose of this current research for Australian, NSW and US populations.

Scoring and description of variables entered into analysis:

The K10 is scored by summing the 10 items to produce a total score that ranges from 10 – 50. Standard groupings were obtained from the National Health Survey to categorise total scores into health categories as follows:

- Low (10- 15)
- Moderate (16-21)
- High (22-29)
- Very high (30-50)

The Satisfaction with Life Scale (Pavot & Diener, 1993)

Quality of life was measured using the Satisfaction with Life Scale (SWLS). The SWLS is designed to assess a person's global judgement of life satisfaction and measures change in subjective well-being. The instrument consists of 5-items that are global rather than specific in nature allowing respondents to weight domains of their lives in terms of their own values to arrive at a global judgement of life satisfaction. The SWLS can be interviewer administered (personal and telephone) and self-administered and takes approximately three minutes to complete. It has shown strong internal reliability and has good convergent validity with other scales and with other assessments of subjective well-being (Diener et al., 1985; Pavot et al., 1991). The SWLS has been shown to have good internal consistency exceeding .80 and acceptable test-retest reliabilities (Pavot & Diener, 1993). Overall the SWLS gives participants the opportunity to assess satisfaction with life not just linking it with health related quality of life.

Scoring and description of variables entered into analysis

An error occurred with the entry of the standard questionnaire into the Computer Assisted Telephone Interviews (CATI) system for this particular scale. For this reason the scale used in this study was a 4-item scale, not the 5-item as original intended. The range of possible responses to this scale was reduced from 5 - 35 to 4 - 28.

In order to reliably categorise scores into the appropriate groups the following cut-points were introduced after the four items were summed to produce a total :

- extremely satisfied (25-28)
- satisfied (21-24)
- slightly satisfied (17-20)
- neutral (16)
- slightly dissatisfied (12-15)
- dissatisfied (8-11)
- extremely dissatisfied (4-7)

2.4.1.2 Social Outcomes

Questions were either taken directly or modified from the General Social Survey (GSS, 2002) to ensure that some comparison could be made to the general Australian population. The GSS is a national survey conducted by the Australian Bureau of Statistics (ABS) in 2002 (results expected to be available in 2003). Of particular interest to the current research was the survey's focus on the relationships between the strength of people's social networks and other areas of well-being. Questions were therefore extracted from the "Family and Community" section of the Survey which assessed participants' network of family and friends and the support they would receive from them as well as the frequency of contact they currently have with them. Participants' involvement in social activities over a three month period was also assessed using a question from the GSS. Activities included group activities such as cultural and religious group actions as well as other activities such as sport participation and spectatorship.

Scoring and description of variables entered into analysis

The scoring manual and results from the 2002 General Social Survey are not as yet reported, so scores for total social contact and total participation in social activities were calculated based on best judgement. These can be re-analysed once the National data are available.

The total contact that participants had with family and friends was calculated by amalgamating two items. One item measured the frequency of face-to-face contact and the other item measured telephone, email and mail contact that participants had with family and friends. Scores on these two items were summed whereby a higher total score (range of 2 to 10) indicated less frequent contact.

The total participation in social activities was calculated by summing the multi-response item measuring participation in 9 social activities (recreational or cultural group activities, community of special interest activities, church/religious activities, café/restaurant/bar, sport or physical activities, sporting spectator, library/museum/art gallery, movies/theatre/concert, park/zoo/theme park). The higher the score the greater the participation in social activities (range 0 – 9).

2.4.1.3 Financial Outcomes

The GSS was also used to gather normative, standardised questions that could assess participants' financial outcomes. The GSS survey measures financial outcomes using questions framed under what is termed "financial stress". This dimension encompasses the types of cash flow problems and consumer debt people may have.

The social and economic consequences of compensation (eg. Effect on family and friends) was also included in the survey. A question was taken from the Work Injury and Outcomes Survey developed by Pransky et al (2000). This item was subjected to appropriate reliability and validity checks and evaluated according to published criteria (Nunnally, 1978).

Scoring and description of variables entered into analysis:

Dissaving actions, a term used in the GSS, refer to recent actions which effectively reduce the savings of participants in the sample. These nine savings reducing actions that were taken from the GSS (2002) included the following items: reduced home loan repayments, drew on savings/term deposits, increased the balance owing on credit cards, loan agreement with family/friends, personal loan, sold household goods, sold shares/stocks, sold other assets, other dissaving action.

These actions were summed to produce a total score of 1 to 9.

Current consumer debt was calculated using an item from the GSS (2002). This assessed whether participants had any of the following types of consumer debt currently outstanding: home loan, car loan or personal loan, interest free purchases, hire purchase agreements, other consumer debt (eg. credit card), or no consumer debt.

2.4.1.4 Return to work

Return to work (RTW) is a key outcome used to measure the performance of workers' compensation systems both in Australia and overseas. To assess this important dimension the survey included questions about whether participants had returned to work at all, the durability of this return to work and the length of time before they returned to work. The survey also assessed whether participants had returned to the same employer as before their work injury and whether they were carrying out the same type of work (referred later in this report as employer/job status). These questions were either taken

directly or were modified based on the Campbell's "Return to Work Monitor" (2000). The Return to Work Monitor (Campbell, 2000) was commissioned to survey injured workers on their return to work outcomes and experience as a measure of the performance of the workers' compensation systems in Australia in a consistent format. The questions used in the monitor were based on those used by the Victorian WorkCover Authority since 1993 and the South Australian WorkCover Corporation since 1996.

Satisfaction with the return to work experience and current job were also assessed using questions taken from Pransky's (2000) Work Injury and Outcomes Survey.

For a description of RTW variables entered into analysis see Table 2-9 for the cut-off points used for the categorical variables.

2.4.1.5 Claims and rehabilitation experience

The overall level of knowledge (see Table 2-7 for definition) claimants had about the compensation system when they claimed for compensation was assessed using questions developed from an earlier phase of research that was conducted for this project (PwC, 2002). This research indicated that the amount and type of knowledge claimants had about their compensation influenced the compensation pathway they chose and their experience throughout the compensation process.

The influence that advice (see Table 2-7 for definition) has on claimant behaviour and the experience of compensation has been inferred from previous research (eg. Campbell, 2000) but has received no formal analysis. The qualitative work completed in phase 2 of this project underscored the potential importance of advice (PwC, 2002). This aspect of the compensation process was assessed in the current study using questions developed for in-depth interviews during the previous phase of the research (PwC, 2002). These questions covered the types of people who provided claimants with advice and the claimants' satisfaction with this advice (using a standard five point satisfaction scale).

A standard five point scale of satisfaction was also used to assess claimants' satisfaction with the overall claims process. As claiming for compensation has been shown to be a stressful and complicated process for some injured workers it was important to get some idea about the relationship between perception of this process and outcomes (PwC, 2002).

Returning an injured person to work is the major goal of rehabilitation in the compensation system. In addition to the return to work outcome questions described previously, the current study attempted to assess claimants' perception of and satisfaction with the rehabilitation they received for their injury. The previous phase of research (PwC, 2002) suggested that the rehabilitation experience and the management of the injury were some of the mechanisms underlying the relationship between the pathway of

compensation and outcomes. The current survey used a five point scale of global satisfaction as well as questions which assessed the perceived level of a commitment (see Table 2-7 for definition) of those involved in rehabilitation to return the claimant to work to further explore the role of these experiences. These questions and one which addressed the suitability of the return to work process were derived from previous research (Campbell, 2000).

For a description of claims and rehabilitation variables entered into analysis see Table 2-9. The definitions of claims and rehabilitation terms used in the survey will also be outlined in Section 4 of this report.

2.4.1.6 Socio-demographic characteristics

Socio-demographic factors such as age, sex, socio-economic status and occupation type have all been found to affect not only claiming behaviour (eg, Atlas et al, 2000) but also claimant outcomes (See PwC, 2002 for review).

Characteristics of claimants that were available from the WorkCover data base included age, gender and date of birth. For this reason, these characteristics were not asked of participants in the current survey.

Socio-demographic characteristics that were sought in the survey included:

- Current employment status.
- Current occupation- classified using the ASCO coding to the three digit occupation level taken from the Australian National Census (Census).
- Ethnicity and culture – questions and coding for the country of birth and other language spoken at home were taken from the Census codes used by the ABS. These codes have norms at the national and state level.
- Marital status – question taken directly from the Census and NSW Health Survey 1997/1998.
- Education level – the highest qualification that the claimant had obtained was measured using question 31in the National Health Survey, a question which is also used in the Census.
- Household income – the current source of income was captured using coding from the National Health Data Dictionary (2001), and the household income in terms of income bands was taken from the Census.

For a description of socio-demographic variables entered into analysis see Table 2-9.

2.5 Survey Procedure

Great care was taken with data collection to ensure that ethical requirements were met, that the sample was as inclusive as possible, and that reliable data was collected. Data collection was conducted by Marketing and Research Associates (MRA) under close supervision by PwC. A standardised telephone survey method -one of the most common and accepted methods for surveys of this type - was used. In line with well-documented practices for obtaining reliable data with this type of survey, comprehensive quality assurance procedures were part of the method and these are discussed in more detail below.

A letter from WorkCover was sent to all prospective participants, fully describing the study, and indicating that they may be contacted and invited to participate. The letter clearly stated that participation was entirely voluntary, that there would be no consequences for refusal and that all data would be collected and reported in de-identified form only. That is, completed questionnaires would only ever be identified by code number. Each claimant was then telephoned and invited to take part in the interview. In this telephone call the study was described again, any questions were answered, and then the claimant was asked for informed voluntary consent to participate in the survey. The interview on average took approximately 35 minutes. The interview was administered by trained interviewers in a standardised way. This was assessed with quality assurance procedures.

One strength of our procedure was to have a named WorkCover member of staff as the contact name on the invitation letter and in the interviews. When participants were distressed or concerned about the study they could contact the WorkCover staff member directly. A rapid electronic information flow system was set up between WorkCover, PwC and MRA to tackle potential problems as soon as they arose. This three way collaboration contributed to the success of this project because only a very small number of claimants were distressed by the interview and the few who had concerns were managed promptly.

Data Quality Assurance Procedures

In line with well-documented practices for obtaining reliable data with this type of survey, comprehensive quality assurance procedures were part of the method.

The aims of the quality control procedures were to:

- Ensure that response rate targets were being met in terms of quotas and demographic quotas within cell.
- Monitor reasons for refusal.

- Validate the categorisation of claimants into pathway classification from the WorkCover data base.

- Ensure that interviews were being administered reliably. To achieve these aims, MRA had internal quality assurance procedures for interviewing that were conducted continuously for the two month period of data collection. MRA submitted weekly reports to PwC summarising their quality control results and provided additional PwC quality control requirements. PwC sent weekly reports to WorkCover throughout the data collection period to keep WorkCover fully informed with progress.

Ethical Procedures

PwC and MRA have adhered to the National Health and Medical Research Council's National Statement on Human Experimentation and Supplementary Notes 1992 as specified in Part 2 of the WorkCover protocol for Grants Scheme Agreement.

Ethical procedures used in the study were:

- Informed voluntary consent.

- Claimants were free to withdraw from the study at any point and did not have to answer any question they did not want to.

- If participants refused to take part they would receive no further approaches in relation to this survey. This also includes claimants who refused to take part in phase 2 of the current project.

- Identifiable claimant (ie. named) data were not sent electronically.

- All individual data were kept strictly confidential.

- No personal identification was recorded on the questionnaire, anonymity of all respondents was maintained.

- In accordance with NHMRC guidelines, we adopted an inclusive sampling frame as much as possible within the study constraints.

- Throughout interviewing, continuous monitoring of claimant distress levels was performed.

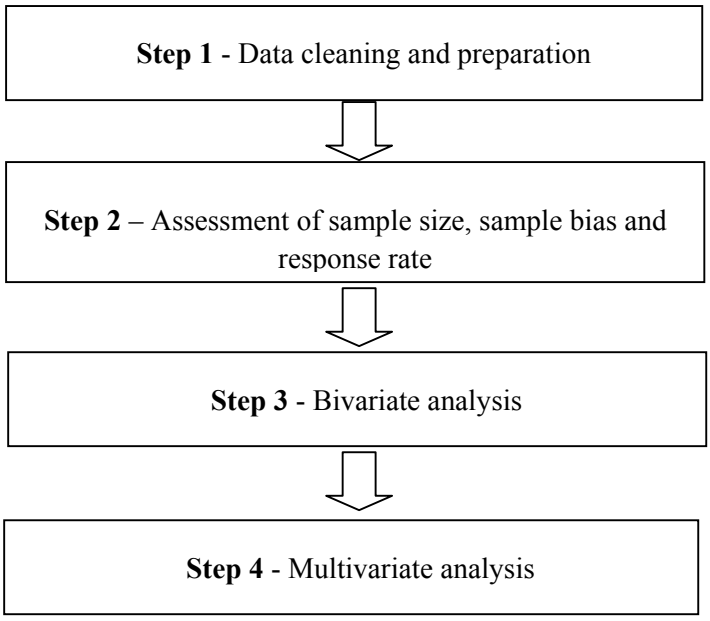
2.6 Data Analysis Approach, Methods and Results Presentation

This section provides an outline of the approach to the data analysis, a description of the statistical methods used to analyse the data, and an outline of how each part of the results are presented.

2.6.1 Data Analysis Approach

Figure 2-3 below describes the steps involved in the analysis of the data.

Figure 2-3 Approach to data analysis



Step 1 - Data cleaning and preparation

The survey data were cleaned by performing standard operations and checks including:

- checking all variables for valid ranges;
- identifying outliers;
- identifying internal consistency;
- identifying correct use of skips;
- correct entry of multiple response items;
- examining patterns of missing data; and
- grouping variables and calculating scales.

There was very little missing data (range 0% – 2% per item), therefore value substitution were not necessary. This reflects the quality of the telephone interviewing that was performed.

Step 2 – Assessment of sample size, sample bias and response rate

The sample frame was designed on a priori statistical principles and was statistically robust. The representativeness of the ultimate sample was verified using post hoc techniques. This included two main lines of analysis. First, the pattern of non-responders and the characteristics of the respondent sample were examined to assess potential response bias (the results of this analysis are reported in Section 3 of this report). Second, statistical power to detect important differences with the sample size and distribution obtained was assessed.

In line with conventional standards, the minimum acceptable level of power for a study is considered to be 0.8 (Cohen, 1988). This results in a 20% chance of a Type II error in which the study fails to detect existing effects. Power to detect reasonable effect sizes for the linear health outcomes (SF-36, both component scale and SF1 item, and Kessler 10) and the categorical outcomes (return to work, social and financial outcomes) were calculated using Nquery Advisor Version 4 (Elashoff, 2000). Full details of the power analysis are contained in Appendix 2.

In summary, with a total sample of 1,021 and with the sub-group samples achieved, the study had sufficient sample to have 90% power to detect existing effects between the three compensation pathways for health and RTW outcomes and at least 80% power to detect existing effects between the three compensation pathways for social and financial outcomes.

Step 3 - Bivariate analysis

Section 4 of this report describes the bi-variate descriptive analysis for each of the five main areas covered by the questionnaire: the four outcome domains (ie. health, return to work, social and financial), and the fifth area, claims and rehabilitation experience. Results are provided for overall scores, frequencies and percentages by the major study stratifications: compensation pathway types, injury severity and time since claim closure. A 10% or more difference between pathways in any of these tabulations was used as the criterion for observations worthy of note.

Tables have also been produced in Section 4 providing comparisons of the responses of the study sample with normative data drawn from routine national and state data collections. These comparisons are only available for certain outcome variables, where data exists and are appropriate. Where of relevant, other data sets are also described for purposes of comparison. The study sample was selected to be representative of the study-specific strata in the NSW workers' compensation population, not a representative sample at either a state or national level, and this will be taken in consideration when describing and interpreting the results.

Step 4 - Multivariate analysis

The aim of the multivariate analysis is to assess the relative statistical contribution of factors to outcomes based on the hypotheses. Logistic regression was the multivariate modelling technique that was used to model

the relationships in the data. Logistic regression allows one to predict a dichotomous outcome such as disease/no disease from a set of predictor variables that may be continuous, discrete, dichotomous or a mix. It is one of the most popular techniques in epidemiological research because it is relatively free of restrictions, and is therefore more flexible than other techniques such as multiple regression, having for example, tolerance for the distribution of the independent variables. Logistic regression is also popular because it produces easily interpretable findings in the form of odds ratios. The odds ratio is the increase in likelihood (or decrease if the ratio is less than 1) of being in one outcome category when the value of the predictor increases by one unit. For example, an odds ratio of 2 associated with high severity injury compared to a reference category of low severity injury for the outcome of not having returned to work indicates that the odds associated with high severity injury for not returning to work is double the likelihood of a worker with a low severity injury. Confidence limits for the odds ratios are usually also reported, as these indicate the robustness or stability of the ratio. Confidence limits which include unity indicate that the odds ratio is within the bounds of what one might expect to find by chance. As in linear regression, the odds ratios are interpreted in the context of the other independent variables, that is each effect in the model is adjusted for the presence of all other effects in the model, so that the final model reflects the independent contribution of factors.

The usual cautions about causal inference, of course, still apply with logistic regression. To say that the odds of an adverse outcome is related to a set of variables is not to say that those variables cause the outcome. The ability to implicate causality depends critically on study design. The present study was a cross sectional study, with retrospective reports of exposure to certain processes and experiences. The results of the analysis are therefore interpreted in terms of statistically robust associative links between factors, not causal links.

While there is no formal requirement for the independent variables to be categorical in logistic regression, interpretation can be enhanced when meaningful categorisation is possible. From inspection of the distributions of possible predictor variables in the current data, it was possible to identify meaningful dichotomisations for most variables. Dichotomous outcome variables were developed on the basis of two considerations. First, cut points that had a priori theoretical value were identified. For instance, the standardised SF-36 component scales have a known distribution in the Australian population, namely a mean of 50 and a standard deviation of 10. It was considered of clinical relevance to model this outcome in terms of substantial deviation from the majority of the Australian population, that is considering that the adverse outcome of importance would be one where a case was outside the population mean by more than one standard deviation unit. Accordingly, the categorisation of interest for this outcome was identifying the odds of having physical or mental health that was/was not outside one standard deviation below the mean of the Australian population (i.e. a score of <40). The distribution of the data was then checked to ensure

that such a categorisation did not wildly skew the data. Where there were no theoretical drivers for identifying cut points, they were based entirely on the distribution of the data.

2.6.1.1 Approach to the multivariate analysis

The approach to the multivariate analysis consisted of two key components:

- Selection of the variables to be used in the analysis
- Modelling approach

1) Selection of variables for inclusion in the analysis

From all the variables in the data base, a systematic approach was taken to the selection of the most sensitive and suitable variables to be entered into the logistic regression models as: predictors, outcomes, outcome adjusters and socio-economic adjusters. The term 'predictor' variable is conventionally used in the context of multivariate analysis to refer to the independent variable. By using the term 'predictor' causation is not implied.

Outcomes – Outcome measures were divided into two categories. First, representatives from each of the four domains of interest were selected for inclusion in the multivariate analysis if they were:

- shown to be sensitive to differences between pathways in univariate and bivariate analysis;
- aligned with the hypotheses of the study; and
- readily dichotomised.

Second, the remaining outcome measures were considered as descriptive outcome variables, and these were used to further contextualise the effects found in the study. As a case in point, number of savings-reducing actions was selected for inclusion into the multivariate analysis based in the above criteria, while the types of savings-reducing actions reported by participants were considered as descriptive financial outcome information.

The predictor variables entered into the univariate analyses were:

1. Compensation pathway
2. Injury severity
3. Time since closure
4. Injury type
5. Claim duration
6. Satisfaction with claims experience
7. Advice received or not
8. Advice received from Lawyer
9. Knowledge of the system
10. Satisfaction with rehabilitation experience
11. Level of commitment from rehabilitation to return to work
12. Suitability of return to work.

If a predictor was univariately significantly ($P < 0.05$) associated with any of the outcomes within each of the four domains (health, return to work, social and financial) then it was entered into the logistic regression models for all outcomes across that domain. Predictors were also examined for correlations, and where any two were highly correlated one member of the pair was removed (eg suitability of return to work was highly correlated with satisfaction with rehabilitation- therefore the 'suitability of RTW' was not included in the analysis).

The results of the univariate analyses are summarised in Table 2-8 below.

Table 2-8 Summary of Results from Univariate Analyses

Predictor Variables	Health outcomes with significant univariate association	Return to Work outcomes with significant univariate association	Financial outcomes with significant univariate association	Social outcomes with significant univariate association
Pathway	SF1, PCS, MCS, K10, SWL, Frequency of Pain, Length of Pain.	RTW rate, Durability of RTW, Satisfaction with RTW, Length of time before RTW, Job Satisfaction	Number of dissaving actions (MV1); Number of dissaving actions	Total contact for social support, total participation in social activities
Injury severity	PCS, MCS, SWL, Frequency of Pain, Length of Pain.	RTW rate, Durability of RTW, Length of time before RTW	Number of dissaving actions	Not significant
Time since closure	K10, SWL, Length of Pain	RTW rate	Not significant	Not significant
Injury type	SWL, Frequency of Pain	RTW rate, Durability of RTW,	Not significant	Not significant
Claim duration	K10	Durability of RTW, Length of time before RTW	Number of dissaving actions (MV1); Number of dissaving actions	Not significant
Satisfaction with claims experience	SF1, K10, Length of Pain	RTW rate, Durability of RTW, Satisfaction with RTW, Length of time before RTW	Number of dissaving actions (MV1); Number of dissaving actions	Total contact for social support
Advice received from Lawyer	SF1, K10, SWL, Frequency of Pain, Length of Pain	RTW rate, Durability of RTW, Length of time before RTW, Job Satisfaction	Number of dissaving actions (MV1)	Total participation in social activities
Knowledge of the system	SWL	Length of time before RTW	Not significant	Total participation in social activities
Satisfaction with Rehabilitation experience	K10, SWL, Frequency of Pain, Length of Pain	RTW rate, Durability of RTW, Satisfaction with RTW, Length of time before RTW, Job Satisfaction	Number of dissaving actions (MV1)	Total participation in social activities
Level of commitment to return to work	SF1, K10, Frequency of Pain, Length of Pain	RTW rate, Durability of RTW, Satisfaction with RTW,	Not significant	Total participation in social activities

Outcome adjusters – The most sensitive outcomes were selected from each domain to act as outcome domain adjusters in the models. The purpose of adjusting the model for any given outcome for other outcome domains was to examine how the outcomes in combination were related to each other and to the predictors. The rationale for this inclusion of outcomes in the modelling is discussed further below, when the approach to modelling is considered. To enter more than one variable for each outcome of interest was considered to constitute an over adjustment. The outcome category representatives were chosen on the basis that they had the strongest relationship with other outcome domains. The outcome representatives for outcome adjustment were:

- Health - duration of pain (representing pain outcomes), SF1 (representing health overall) and K10 (representing psychological health specifically).
- Return to work - return to work durability.
- Social - total amount of social participation in activities.
- Financial - number of savings reducing activities.

Socio-demographic factors – the five socio-demographic adjusters: age, sex, income, education level and employment status were selected based on previous research identifying independent associations between the outcome and these factors. As with the outcome adjusters above to enter more than one variable for each socio-demographic would be considered to constitute an over-adjustment. For example we elected not to adjust for occupational classification because this overlapped with education status and income.

Variables included in the multivariate analysis

The final outcome and independent variables included in the multivariate analysis are described in Table 2-9.

Table 2-9 Description of Variables entered into the Multivariate Model

	Full Variable name and abbreviation	Variable definition
Health outcome variables	**1. SF1 from the SF-36** Abbreviated name: SF1	0 good/very good/excellent 1 fair/poor
	2. Physical component score of the SF-36 Abbreviated name: PCS	0 ≥ 40[1] 1 < 40
	3. Mental Health component score of SF-36 Abbreviated name: MCS	0 ≥ 40 1 < 40
	4. Kessler 10 Abbreviated name: K10	0 low/moderate 1 high/very high
	5. Satisfaction with Life Scale Abbreviated name: SWL	0 neutral/slightly satisfied /satisfied/extremely satisfied 1 slightly dissatisfied /dissatisfied/extremely dissatisfied
	6. Frequency of pain	0 not very/fairly often 1 very often
	7. Duration of pain	0 less than an hour/several hours 1 more than a day
Social Outcomes	**1. Total contact for social support**	0 weekly contact 1 monthly contact or less
	2. Total participation in social activities	0 2 or more social activities 1 0 or 1 social activity in the last three month
Financial Outcomes	**Number of dissaving actions**	0 no dissaving actions 1 1 or more dissaving action
Return to Work Outcomes	**1. Return to work rate**	0 returned to work 1 had not returned to work
	2. Durability of return to work	0 most/all of the time 1 some/none of the time
	3. Satisfaction with return to work	0 neither/satisfied/very satisfied 1 dissatisfied/very dissatisfied

[1] 40 was chosen as the cut-off point which would provide clinically meaningful categories; it provides a cut point at above and below 1 SD less than the population mean

	Full Variable name and abbreviation	Variable definition
	4. Length time before return to work	0 < 6 months 1 >6 months
	5. Job satisfaction	0 same/more satisfied 1 less satisfied
Predictor Variables	**1. Pathway**	0 Weekly Benefits 1 Commutations 2 Common Law
	2. Injury severity	0 Low 1 High
	3. Time since closure	0 Short 1 Long
	4. Injury type	0 Other 1 Sprain/Strain
	5. Claim duration	0 Short 1 Medium 2 Long
	6. Satisfaction with claims experience	0 neither/satisfied/very satisfied 1 dissatisfied/very dissatisfied
	7. Advice received from Lawyer	0 all advice apart from legal advice 1 legal advice
	8. Knowledge of the system	0 at least a little knowledge 1 no knowledge
	9. Satisfaction with Rehabilitation experience	0 neither/satisfied/very satisfied 1 dissatisfied/very dissatisfied
	10. Commitment to return to work	0 at least a little 1 none
Other Outcome variables for adjustment	**1. SF1 from the SF-36**	0 good/very good/excellent 1 fair/poor
	2. Kessler 10	0 low/moderate 1 high/very high
	3. Duration of pain	0 less than an hour/several hours 1 more than a day

	Full Variable name and abbreviation	Variable definition
Socio-demographic variables for adjustment	**1. Age**	Continuous[2]
	2. Sex	0 male 1 female
	3. Income	0 medium / high Income (> $20,800) [3] 1 low income (< $20,800)
	4. Employment status	0 employed 1 not in paid employment
	5. Education status	0 degree 1 trade qualification / diploma 2 no educational qualification / school qualification

2.6.2 Approach to logistic regression modelling.

Logistic regression analyses were carried out in SAS version 8. Three models were produced for each outcome:

Model 1: Process and experience factors associated with outcomes.

Model 2: Process and experience factors associated with outcomes, including the effect of other domain outcomes.

Model 3: Process and experience factors associated with outcomes after adjustment for socio-demographic factors.

The results of these models are reported in Section 5 of this report. A description of each follows in turn.

Model 1 - Process and experience factors associated with outcomes

This model contained both the predictors and the outcomes contained in Table 2-9 for each outcome measure in each outcome domain. Backwards elimination was used to derive the final model. Backwards elimination statistical logistic regression was run in SAS. This process removes predictors from the model solely on statistical criteria, whereby modelling ceases when removal of further variables fails to significantly ($p < 0.05$) improve the model.

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[2] This variable was maintained as continuous in the multivariate analysis as it was the more sensitive version

[3] These cut-off points were chosen based on categories defined in the National Health Survey (2001)

Model 2 - Process and experience factors associated with outcomes, including the effect of other domain outcomes

This model contained the final predictors from Model 1 *"Process and experience factors associated with outcomes"* for each of the outcome models as well as the outcome adjusters contained in Table 2-9 above for each of the other domains. The outcome adjusters that were entered into the models were adjusters for the other outcome domains and not for the same domain as the dependent variable. That is for health outcomes, adjustment was made for return to work, financial and social outcome variables. Inclusion of this stage of modelling recognises that an holistic approach to health and well-being is likely to most accurately describe the data. It is entirely likely that outcomes are inter-related and that, beyond the impact of process and experience, other components of health and well-being will explain part of the outcome in any given domain.

The approach to modelling was the same as for Model 1. Backwards elimination was again used to derive the final model. A backwards elimination statistical logistic regression was run in SAS (significance set at $p < 0.05$).

Model adjusted for socio-demographic factors

This model contains the final predictors from Model 1 *"Process and experience factors associated with outcomes*, for each outcome and the socio-demographic adjusters contained in Table 2-9. Manual forced backwards elimination was used to derive the final model. First a full model was run in SAS. A second model was run where the non-significant adjusters were manually removed from the model and any effect on the point estimates and/or confidence limits was inspected. If the removal of non-significant ($p > 0.10$) adjusters made little difference to the point estimates for the predictors, or precision of these, then the more parsimonious model was retained. The process produced the final model adjusted for socio-demographic factors reported in the results section. A comparison between the full model and the final model (with the forced elimination of non-significant predictors) demonstrates the influence of any significant effect of a socio-demographic factors on the impact of the predictor variables on the outcome.

3 Results – Sample and Representativeness

3.1 Response Rate

The overall response rate was 35%. This was calculated by dividing the number of participants who agreed to take part (participants) by the number who were invited to take part in the survey (participants and refusers). This response rate was higher than that expected (expected target was 25%) and higher than other telephone surveys that have been reviewed. Table 3-1 contains the response rate by the twelve groups. For all groups the response rate was above 30% except for the group "Commutations, low severity, long time since closure" (28%). The highest response rate was achieved for "Common Law, high severity, short time since closure" (40%). (Appendix 3 contains the response rates further broken down by participants, refusals and non-contacts.)

Invitation letters were sent out to 9,515 eligible claimants who were selected from the WorkCover claims data base in accordance with the criteria for the stratification and representative characteristic variables (see Section 2.3 sample and sample selection). Not all of these claimants who received an invitation letter were called and invited to take part in the study because quotas for sampling had been achieved. We sent out a large amount of invitation letters so that we would be able to deal with the possibility of a poor response rate. Contact was attempted with 4,758 claimants, 4,440 were not contacted because the sample-frame had been achieved and 317 letters were returned to sender.

Of those who were called (n=4,758): one fifth participated (n=1,021), just over one third refused (n=1891) and the remainder were non-contactable (n=1,846). (See in Figure 2-2 for a flow diagram of the response rate). The majority of refusers did not give a reason and refused at the introduction. Where provided, reasons for refusal were: "didn't understand the terms of the survey" (n=2), "too busy" (n=33), "in too much pain" (n=1) and "language difficulties" (n=78).

The main reasons for non-contact recorded were: wrong number, no answer, telephone number non-existent. The reasons for non-contact were mainly because the telephone matching to the claimant addresses in the WorkCover data base did not result in identification of the correct telephone number for the claimant. It should be noted that for some claimants the recorded address was five years out of date and mobility of the population could be expected over this timeframe. For other claimants some address details may have been incorrect in the first place. Other reasons were coded as: business number, fax machine, not available for the duration of the survey, pager, and only available on mobile.

Table 3-1 Response rates for each of the 12 groups

Group			Participating Sample		Refusals	
Pathway	Severity	Time Since Closure	Frequency	Percentage (Response Rate)	Frequency	Percentage
Common Law	High	Long	63	37	108	63
Common Law	High	Short	83	40	122	60
Common Law	Low	Long	50	31	109	69
Common Law	Low	Short	89	40	134	60
Commutations	High	Long	91	34	180	66
Commutations	High	Short	89	35	162	65
Commutations	Low	Long	88	28	223	72
Commutations	Low	Short	118	36	209	64
Weekly Benefits	High	Long	79	33	159	67
Weekly Benefits	High	Short	87	32	182	68
Weekly Benefits	Low	Long	92	37	158	63
Weekly Benefits	Low	Short	92	39	145	61
Total			1021	35	1891	65

Achieved Sample Versus Target Sample

Table 3-2 below describes the overall sample achieved compared with the targets identified in the sample frame. For this purpose, response rate is defined as the proportion of the target sample actually achieved. For all four subgroups in the Commutations pathway the achieved sample size was larger than our target sample. For three of the subgroups in the Weekly Benefit pathway the achieved sample size was larger than our target sample, the exception being the "Weekly Benefits, high severity long time since closure" group where the rate was 95%. The overall response rate for the Common Law pathway was 86%. For two subgroups of the Common Law pathway the achieved sample size was larger than our target sample, the exceptions being both the "long time since closure" groups for both the low severity (60%) and high severity (76%) groups. While, 60% and 76% are acceptable response rates, it is important to examine how representative these achieved samples are of these population groups in the WorkCover data base.

Table 3-2 Achieved sample by target sample response rate

Group			Target Sample	Achieved Sample	Response Rate
Pathway	Severity	Time Since Closure	Frequency	Frequency	Percentage
Common Law	High	Long	83	63	76
Common Law	High	Short	83	83	100
Common Law	Low	Long	83	50	60
Common Law	Low	Short	83	89	107
Commutations	High	Long	83	91	110
Commutations	High	Short	83	89	107
Commutations	Low	Long	83	88	106
Commutations	Low	Short	83	118	142
Weekly Benefits	High	Long	83	79	95
Weekly Benefits	High	Short	83	87	105
Weekly Benefits	Low	Long	83	92	111
Weekly Benefits	Low	Short	83	92	111
Total			996	1021	103

3.1.1 Representativeness of the Achieved Sample

It is important to determine whether there was any bias in the sampling by systematically examining the representativeness of the sample who agreed to participate compared with the population from which the sample was drawn. The twelve groups who took part in the survey were chosen to be representative of their population stratum not the whole claimant population. When the sample is described below as being compared to "the population" it is being compared with the key representative characteristics of the population strata included in the study design (e.g. Common Law, high severity, long time since closure).

If the achieved sample differed from the target sample by more than 10% on a key representative characteristic of the population stratum then it is discussed below as a difference worthy of comment. A difference of more than 20% would be considered a large and important difference, however none of the differences were larger than 20%.

3.1.1.1 Representativeness of the Common Law groups

The sample achieved for "Common Law, low severity and short duration" was representative of the population in terms of age at injury, gender, geographical location, occupational class, claim duration at closure and injury type.

The sample achieved for "Common Law, low severity and long duration" was representative of the population in terms of age at injury, gender and occupational class. The sample was less representative in terms of geographical location, claim duration and injury type. The achieved sample was more likely to be living in rural areas and less likely to be living in the capital compared with the population. The achieved sample was more likely to have a claim duration less than 5 years compared with the population. The achieved sample was more likely to have a sprain or strain injury and less likely to have an "other injury" compared with the population.

The sample achieved for "Common Law, high severity and short duration" was representative of the population in terms of gender and occupational class. The sample was less representative in terms of age at injury, geographical location, claim duration and injury type. The sample achieved was less likely to be younger than 30 than those in the population. The achieved sample was more likely to be living in rural areas and was less likely to be living in the capital compared with the population. The achieved sample was less likely to have a claim duration of more than 5 years compared with the population. The achieved sample was more likely to have a sprain or strain injury and less likely to have an "other injury" compared with the population.

The sample achieved for "Common Law, high severity and long duration" was representative of the population in terms of gender and claim duration. The sample was less representative in terms of age at injury, geographical location, occupational class, and injury type. The sample achieved was less likely to be younger than 30 and more likely to be over 45 years than the population. The achieved sample was less likely to be living in regional areas compared with the population. The achieved sample was less likely to be classified as "professional and clerical" and more likely to be classified as "trades, labourer and related occupations" than the population. The achieved sample was less likely to have a sprain or strain injury and more likely to have an "other injury" compared with the population.

3.1.1.2 Representativeness of the Commutations groups

The sample achieved for all four Commutations groups was representative of the population in terms of age at injury, gender, geographical location, occupational class, claim duration and type of injury.

3.1.1.3 Representativeness of the Weekly Benefit groups

The sample achieved for the following three Weekly Benefit groups were representative of the population in terms of age at injury, gender, geographical location, occupational class, claim duration and type of injury.

- Weekly Benefits, low severity, short duration
- Weekly Benefits, low severity, long duration
- Weekly Benefits, high severity, short duration

The fourth group "Weekly Benefits, high severity, long duration" was representative of the population in terms of gender, geographical location, occupational class, claim duration and injury type. The sample was less representative in terms of age at injury. The achieved sample was less likely than the population to be less than 30 years of age.

Table 3-3(a) Achieved sample by target sample frame matching characteristics for the Common Law Group

	Payment Type	Common Law							
	Severity	Low				High			
	Time Since Closure	Short		Long		Short		Long	
		Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
Age at Injury (years)	<30	27%	19%	27%	22%	27%	14%	27%	14%
	30 to 44	44%	43%	44%	40%	46%	51%	46%	44%
	45+	30%	38%	30%	38%	27%	35%	27%	41%
Gender	Female	23%	25%	23%	34%	19%	27%	19%	13%
	Male	77%	75%	77%	66%	82%	73%	82%	87%
Geographical Location	Capital	44%	40%	44%	32%	43%	29%	43%	29%
	Regional	18%	11%	18%	14%	15%	19%	15%	22%
	Rural	38%	48%	38%	54%	42%	52%	42%	49%
Occupation Class. (ASCO)	Professional and Clerical Classification	64%	63%	64%	70%	53%	58%	53%	43%
	Trades, Labour and Related Classifications	36%	37%	36%	30%	47%	42%	47%	57%
Claim Duration at Closure (wks)	<80	-	-	-	-	-	-	-	-
	80 to 200	-	-	-	-	-	-	-	-
	200+	-	-	-	-	-	-	-	-
	<3 yrs	25%	27%	25%	36%	14%	22%	14%	16%
	3 to 5 yrs	48%	52%	48%	50%	50%	58%	50%	44%
	5+ yrs	27%	21%	27%	14%	35%	20%	35%	40%
Injury type	Sprain/Strain	49%	56%	49%	64%	51%	66%	51%	37%
	Other	51%	44%	51%	36%	49%	34%	49%	63%

Table 3-3(b) Achieved sample by target sample frame matching characteristics for the Commutations Group

	Payment Type	Commutations							
	Severity	Low				High			
	Time Since Closure	Short		Long		Short		Long	
		Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
Age at Injury (years)	<30	23%	22%	23%	15%	18%	13%	18%	13%
	30 to 44	43%	46%	43%	45%	42%	43%	42%	43%
	45+	35%	32%	35%	40%	39%	44%	39%	44%
Gender	Female	38%	42%	38%	40%	32%	31%	32%	34%
	Male	62%	58%	62%	60%	68%	69%	68%	66%
Geographical Location	Capital	44%	36%	44%	38%	42%	39%	42%	42%
	Regional	17%	18%	17%	19%	17%	17%	17%	18%
	Rural	38%	46%	38%	43%	41%	44%	41%	41%
Occupation Class. (ASCO)	Professional and Clerical Classification	69%	74%	69%	69%	63%	66%	63%	59%
	Trades, Labour and Related Classifications	31%	26%	31%	31%	37%	34%	37%	41%
Claim Duration at Closure (wks)	<80	-	-	-	-	-	-	-	-
	80 to 200	-	-	-	-	-	-	-	-
	200+	-	-	-	-	-	-	-	-
	<3 yrs	31%	27%	31%	33%	17%	13%	17%	18%
	3 to 5 yrs	36%	32%	36%	40%	33%	35%	33%	32%
	5+ yrs	33%	41%	33%	27%	50%	52%	50%	51%
Injury type	Sprain/Strain	57%	56%	57%	58%	63%	67%	63%	60%
	Other	43%	44%	43%	42%	37%	33%	37%	40%

Table 3-3(c) Achieved sample by target sample frame matching characteristics for the Weekly Benefits Groups

	Payment Type	Weekly Benefits							
	Severity	Low				High			
	Time Since Closure	Short		Long		Short		Long	
		Target	Achieved	Target	Achieved	Target	Achieved	Target	Achieved
Age at Injury (years)	<30	30%	28%	30%	23%	25%	20%	25%	11%
	30 to 44	38%	35%	38%	40%	38%	38%	38%	47%
	45+	32%	37%	32%	37%	37%	43%	37%	42%
Gender	Female	27%	27%	27%	25%	32%	33%	32%	42%
	Male	73%	73%	73%	75%	68%	67%	68%	58%
Geographical Location	Capital	52%	51%	52%	46%	48%	39%	48%	38%
	Regional	16%	16%	16%	18%	17%	22%	17%	18%
	Rural	32%	33%	32%	36%	35%	39%	35%	44%
Occupation Class. (ASCO)	Professional and Clerical Classification	62%	60%	62%	62%	64%	61%	64%	71%
	Trades, Labour and Related Classifications	38%	40%	38%	38%	36%	39%	36%	29%
Claim Duration at Closure (wks)	<80	43%	42%	43%	48%	12%	9%	12%	15%
	80 to 200	38%	39%	38%	34%	39%	37%	39%	38%
	200+	19%	18%	19%	18%	50%	54%	50%	47%
	<3 yrs	-	-	-	-	-	-	-	-
	3 to 5 yrs	-	-	-	-	-	-	-	-
	5+ yrs	-	-	-	-	-	-	-	-
Injury type	Sprain/Strain	47%	46%	47%	43%	47%	49%	47%	56%
	Other	53%	54%	53%	57%	53%	51%	53%	44%

3.1.1.4 Summary of the representativeness of the achieved sample compared with the population strata

In this section the sample achieved has been compared in terms of the six key sample-frame representative features of the twelve population strata from which the sample was drawn. These characteristics were: age at injury, gender, geographical location, occupational class, claim duration at closure and injury type.

On the whole very representative samples for the Commutations and Weekly Benefit groups were achieved from the population strata from which the sample was drawn. Common Law claimants were harder to select due to the fact that there were fewer Common Law claims in the WorkCover data base and hence they were more difficult as a group sample frame to recruit .This is reflected in the response rate for the two Common Law groups of claimants who had their claim closed for a long period of time, that is the "Common Law, high severity, long time since closure" and the "Common Law, low severity, long time since closure". The Common Law sample that was achieved for the study was fairly representative of the sample frame for Common Law strata from which they were drawn. The main trend emerging was that the Common Law achieved sample was more likely to be older, live in rural areas, have a shorter claim duration and have a sprain or strain injury compared with their population strata. Where there was a difference on these characteristics it was not of a magnitude larger than 20%, suggesting that the achieved sample is fairly representative of the Common Law population from which the sample was drawn.

3.1.2 Representativeness of Participating Sample Compared with Refusals and Non-contactable Claimants

The second important potential source of sampling bias is that those claimants who did not take part in the study differed from the achieved sample on key representative characteristics. To examine whether this bias was present we compared the sample who agreed to take part with the sample who refused and the sample who were not contacted on representative characteristics. The same criteria described above for examining the representativeness of the achieved sample (ie. 10% and 20% deviation) were used in the presentation of these results. For purposes of parsimony, these comparisons were undertaken by characteristic variables, without consideration of the stratification variables.

From (Table 3-4(a), (b) & (c)), the Common Law, Commutation claimants, Weekly Benefit claimants who refused to take part in the survey did not differ from the achieved sample on any sample frame characteristic.

Common Law claimants who could not be contacted to take part in the survey differed from the achieved sample on one characteristic: age at interview (Table 3-4 (a), (b) & (c)). The Common Law claimants who could not be contacted to take part in the survey were more likely to be less than 30 and less likely to be older than 45 years compared with the achieved sample.

Commutation claimants who could not be contacted to take part in the survey did not differ from the achieved sample on any characteristic.

Weekly Benefit claimants who could not be contacted to take part in the survey differed from the achieved sample on one characteristic: age at interview (Table 3-4 (a), (b) & (c)). The claimants who could not be contacted to take part in the survey were more likely to be less than 30 compared with the achieved sample.

In summary, there does not appear to be any systematic bias in the achieved sample due to non-response or non-contact. There were very few differences between those claimants who agreed to take part in the survey and those claimants who refused to take part or were not-contactable. The only point of difference was that claimants who were non-contactable were more likely to be under 30 years of age (this was less than a 20% difference) and this is likely to reflect the fact that younger adults are more mobile than older adults.

Table 3-4(a) Representativeness of participating sample compared with refusals and non-contacts for Common Law

Common Law	Participated		Non-Contact		Refused	
	N	%	N	%	N	%
Age group						
<30	49	17.19	175	34.05	95	20.08
30 to 44	128	44.91	221	43.00	187	39.53
45+	108	37.89	118	22.96	191	40.38
Gender						
F	69	24.21	90	17.51	73	15.43
M	216	75.79	424	82.49	400	84.57
Geographical region						
Capital	94	32.98	206	40.08	197	41.65
Regional	47	16.49	76	14.79	78	16.49
Rural	144	50.53	232	45.14	198	41.86
Occupational category						
Blue	119	41.75	218	42.41	229	48.41
White	166	58.25	296	57.59	244	51.59
Duration group						
<80	0	0.00	0	0.00	0	0.00
80 to 200	0	0.00	0	0.00	0	0.00
200+	0	0.00	0	0.00	0	0.00
<3 yrs	70	24.56	90	17.51	86	18.18
3 to 5 yrs	147	51.58	257	50.00	225	47.57
5+ yrs	68	23.86	167	32.49	162	34.25
Injury type						
Other	125	43.86	241	46.89	227	47.99
Sprain/Strain	160	56.14	273	53.11	246	52.01

Table 3-4(b) Representativeness of participating sample compared with refusals and non-contacts for Commutations

	Participated		Non-Contact		Refused	
	N	%	N	%	N	%
Age group						
<30	63	16.32	164	25.47	119	15.37
30 to 44	171	44.30	270	41.93	280	36.18
45+	152	39.38	210	32.61	375	48.45
Gender						
F	144	37.31	215	33.39	233	30.10
M	242	62.69	429	66.61	541	69.90
Geographical region						
Capital	149	38.60	292	45.34	332	42.89
Regional	69	17.88	96	14.91	129	16.67
Rural	168	43.52	256	39.75	313	40.44
Occupational category						
Blue	125	32.38	231	35.87	296	38.24
White	261	67.62	413	64.13	478	61.76
Duration group						
<80	0	0.00	0	0.00	0	0.00
80 to 200	0	0.00	0	0.00	0	0.00
200+	0	0.00	0	0.00	0	0.00
<3 yrs	89	23.06	158	24.53	184	23.77
3 to 5 yrs	133	34.46	245	38.04	265	34.24
5+ yrs	164	42.49	241	37.42	325	41.99
Injury type						
Other	154	39.90	246	38.20	344	44.44
Sprain/Strain	232	60.10	398	61.80	430	55.56

Table 3-4(c) Representativeness of participating sample compared with refusals and non-contacts for Weekly Benefits

	Participated		Non-Contact		Refused	
	N	%	N	%	N	%
Age group						
<30	73	20.86	222	32.27	149	23.14
30 to 44	139	39.71	241	35.03	203	31.52
45+	138	39.43	225	32.70	292	45.34
Gender						
F	110	31.43	216	31.40	175	27.17
M	240	68.57	472	68.60	469	72.83
Geographical region						
Capital	153	43.71	350	50.87	357	55.43
Regional	65	18.57	107	15.55	88	13.66
Rural	132	37.71	231	33.58	199	30.90
Occupational category						
Blue	129	36.86	222	32.27	252	39.13
White	221	63.14	466	67.73	392	60.87
Duration group						
<80	103	29.43	207	30.09	146	22.67
80 to 200	129	36.86	287	41.72	241	37.42
200+	118	33.71	194	28.20	257	39.91
<3 yrs	0	0.00	0	0.00	0	0.00
3 to 5 yrs	0	0.00	0	0.00	0	0.00
5+ yrs	0	0.00	0	0.00	0	0.00
Injury type						
Other	181	51.71	357	51.89	321	49.84
Sprain/Strain	169	48.29	331	48.11	323	50.16

3.2 Socio-demographic Characteristics of the Sample

The descriptive analysis of the socio-demographics of the sample are intended to provide non-statistical interpretation of the observed sample characteristics. No statistical inferences are intended, and, in general, differences meaningful in the context of the current study's research questions are identified. This means that some small differences which might be significant with statistical tests (given the large sample size) might not considered worthy of note.

The mean age of the sample was 47.3 (SD = 11.5)[4] (Table 3-5). This mean age did not differ to any noticeable degree across the different compensation pathways. Nor did mean age differ by severity of injuries or the time since claim closure.

[4] The age of participants was calculated using information provided by respondents in the questionnaire. Of the entire sample there was insufficient information provided by 5 participants in order to calculate their age at interview

Table 3-5 Mean Age Overall and by Groups

			Common Law			Commutations			Weekly Benefit			All		
			Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Age at interview		*Total*	*46.4*	*10.6*	*284*	*48.3*	*10.8*	*383*	*46.9*	*12.9*	*349*	*47.3*	*11.5*	*1016*
	Severity	High	47.3	10.3	145	49.8	10.7	179	49.2	12.6	166	48.9	11.3	490
		Low	45.4	10.8	139	47.0	10.8	204	44.8	12.8	183	45.8	11.6	526
	Time Since Closure	Long	47.4	11.1	112	50.0	10.0	177	48.4	12.2	171	48.8	11.1	460
		Short	45.7	10.2	172	46.9	11.4	206	45.4	13.4	178	46.0	11.7	556

Table 3-6 illustrates that just over two thirds (68%) of the claimants were male. This proportion of males is highly comparable to other studies in the workers' compensation field (eg Campbell, 2000; Pransky et al, 2000). However, when comparing across groups, there tended to be a higher proportion of males compared to females in the Common Law group (Table 3-6), as was expected from the study sampling frame. There also seemed to be a greater number of males with low severity injuries than females in the Weekly Benefits group.

Approximately 20% of the sample was born overseas and 14% spoke a language other than English at home (Table 3-6). Neither country of birth or language spoken at home varied by pathway.

Overall about three quarters (73%) of the sample were married. This pattern remained stable across all sample groups (Table 3-6). The majority of the sample (88%) had received either a school qualification or TAFE/ certificate/diploma or other below degree. Table 3-6 also shows that almost 7 in 10 participants reported an annual income of greater than $20,800. A greater proportion of those in the Weekly Benefits group reported an income at the time of the interview as being at the highest end of the income spectrum ($52,000 and over), compared to the other two compensation pathway groups.

Overall, approximately half (48%) of the current sample reported that they were employed in the labour force at the time of the interview (Table 3-6). Weekly Benefits participants were much more likely to be employed than either Common Law or Commutations participants. Nearly two thirds of the Weekly Benefits participants reported that they were employed in the labour force. In contrast, less than half of the Common Law and Commutations participants reported that they were employed at the time of the interview. Those with High severity injuries (49 %) were also more likely to report not being in the labour force compared with Low severity (37%) claimants (See Appendix 4 Tables A3 and A4).

There was a relatively even split by claimants' occupation (trades, labour or related classification and professional and clerical classification) in the sample overall and across groups. However for those who had retired at the time of interview there was a larger proportion of those in trades, labour or related classification jobs.

Table 3-6 Socio-Demographic Characteristics by Pathway

	Common Law		Commutations		Weekly		All	
	%	N	%	N	%	N	%	N
Sex								
Male	75.8	216	62.7	242	68.6	240	68	698
Female	24.2	69	37.3	144	31.4	110	32	323
All	*100.0*	*285*	*100.0*	*386*	*100.0*	*350*	*100*	*1021*
Country of Birth								
Australia	81.1	231	80.1	309	78.3	274	80	814
Other country	19.0	54	20.0	77	21.7	76	20	207
All	*100.0*	*285*	*100.0*	*386*	*100.0*	*350*	*100*	*1021*
Indigenous status								
Neither	95.7	221	99.4	307	97.1	266	98	794
Aboriginal	3.5	8	0.7	2	2.6	7	2	17
Torres Strait Islander	0.9	2	.	.	0.4	1	0	3
All	*100.0*	*231*	*100.0*	*309*	*100.0*	*274*	*100*	*814*
Language spoken at home								
English	88.4	252	84.2	325	86.3	302	86	879
Other language	11.6	33	15.8	61	13.7	48	14	142
All	*100.0*	*285*	*100.0*	*386*	*100.0*	*350*	*100*	*1021*
Marital Status								
Married	76.3	216	75.6	291	68.2	238	73	745
Not married	23.7	67	24.4	94	31.8	111	27	272
All	*100.0*	*283*	*100.0*	*385*	*100.0*	*349*	*100*	*1017*
Highest qualification								
No educational qualification	6.4	18	8.1	31	7.2	25	7	74
School qualification	46.5	131	49.1	188	42.7	149	46	468
TAFE/certificate/diploma or	44.7	126	38.4	147	45.0	157	42	430
University degree or equivalent	2.5	7	4.4	17	5.2	18	4	42
All	*100.0*	*282*	*100.0*	*383*	*100.0*	*349*	*100*	*1014*
Income								
Nil or negative	10.4	29	3.7	14	0.9	3	5	46
$1 - $6,200	2.5	7	3.7	14	0.9	3	2	24
$6,200 - $20,800	22.6	63	30.4	114	21.0	72	25	249
$20.800 - $52.000	46.6	130	44.8	168	46.4	159	46	457
$52,000 and over	17.9	50	17.3	65	30.9	106	22	221
All	*100.0*	*279*	*100.0*	*375*	*100.0*	*343*	*100*	*997*
Employment status								
Employed	41.4	118	38.9	150	62.3	218	48	486
Unemployed	13.0	37	10.4	40	6.3	22	10	99
Not in labour force	45.6	130	50.8	196	31.4	110	43	436
All	*100.0*	*285*	*100.0*	*386*	*100.0*	*350*	*100*	*1021*
Occupation (ASCO)								
Professional and Clerical Classification	50.0	63	46.6	76	43.9	101	46	240
Trades, Labour and Related Classifications	50.0	63	53.4	87	56.1	129	54	279
All	*100.0*	*126*	*100.0*	*163*	*100.0*	*230*	*100*	*519*
Occupation prior to retirement								
Professional and Clerical Classification	28.6	6	40.6	13	46.9	15	40.0	34
Trades, Labour and Related Classifications	71.4	15	59.4	19	53.1	17	60.0	51
All	*100.0*	*21*	*100.0*	*32*	*100.0*	*32*	*100.0*	*85*

3.3 Distribution of the Final Sample on Injury Severity and Time Since Claim Closure

The distribution of the sample for the injury severity measure is presented in the figures below (Figure 3-1 to Figure 3-3). As the data show, within each pathway there was a reasonable spread across the sample frame categories. Of particular interest in these data is that the majority of the Weekly Benefits participants were at the more severe end of the spectrum for this pathway (i.e. in receipt of payed benefits for greater than 90 days).

The distribution of the sample on comparable measures of severity is presented in Figure 3-4 to Figure 3-6. Because the Section 66 Case estimate measure is not available for all Weekly Benefits cases, a reduced sample is represented in these boxplots (n=239; 68% of the Weekly Benefits sample), and the same reduced sample is represented in each boxplot for the sake of consistency. These data show that, irrespective of the measure used, there is separation between high and low severity groups for each pathway type. Moreover, when the two measures actually used in the study to classify cases were examined, Section 66 case estimate and total days paid, there is clear overlap in distributions of both the high and the low groupings. Not surprisingly, the distribution of the high severity Common Law group extends beyond any other group for the Section 66 estimate.

The distribution of gross costs incurred (Figure 3-6) shows something of an expected linear progression from the low severity Weekly Benefits (Wkly) group, through to the highest costs being associated with the high severity Common Law (CL) group. Considerable overlap was evident between the Commutations (Comm) and Weekly benefits groups with the most obvious outliers being the two Common Law groups. As described earlier, these distributions were all based on the same reduced sample of Weekly Benefits claimants, those who had a Section 66 estimate. Using the complete sample of Weekly Benefits participants did not substantively change these distributions. These total costs will reflect a combination of factors, legal costs, medical costs, lump sum payments and so forth. The extent to which greater total costs, particularly the settlement sum, reflect injury severity however are unknown. Many aspects of the process, particularly when the process is litigated, may make the relationship between total costs and injury nature and severity a non-linear one.

Overall, these data indicate that the most severe Common Law cases in the sample are likely to be outliers at the severe end of most measures of severity. Both gross incurred cost and days paid severity measures suggest that the “Common Law Low” participants as a group are at least as severe as the high severity claims from other pathways on these measures. However, these distributional data also support the suggestion that there was overlap in the severity distributions of the three pathway samples recruited for this study.

Figure 3-1 **Distribution of Common Law participants across the range of the severity measure (Max (Sec. 66 Case Estimate)/(Statutory Maximum))**

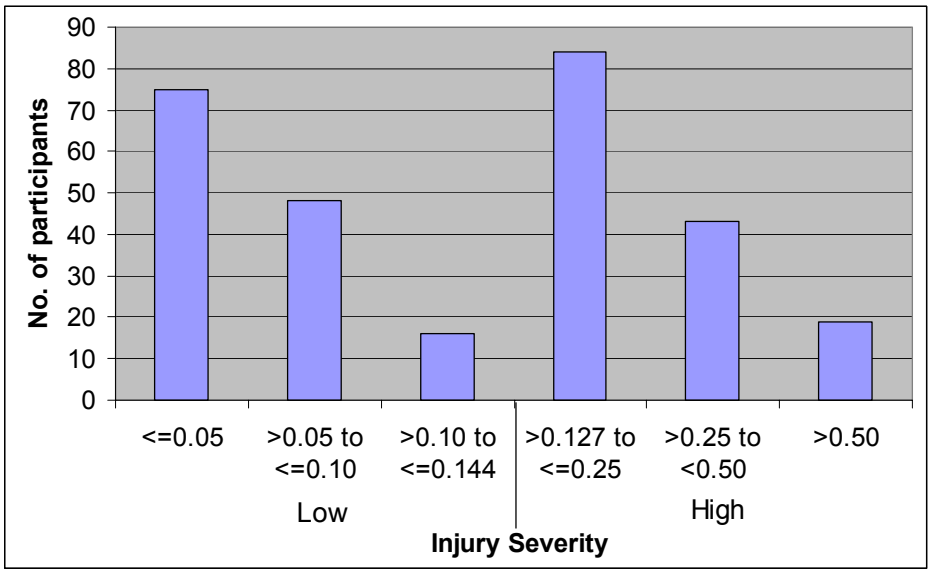


Figure 3-2 **Distribution of Commutation participants across the range of the severity measure (Max (Sec. 66 Case Estimate)/(Statutory Maximum))**

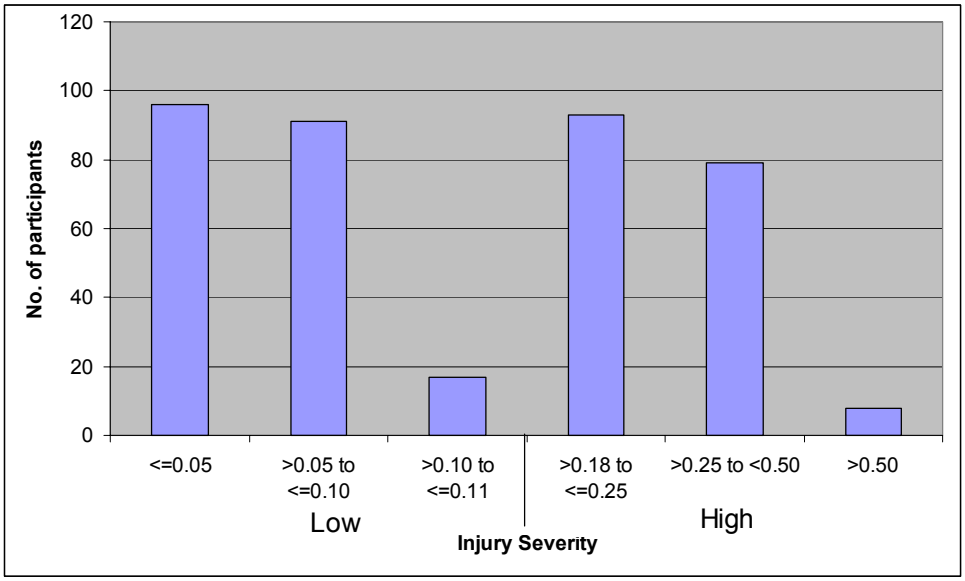


Figure 3-3 **Distribution of Weekly Benefits participants across the range of the severity measure (no. of days paid)**

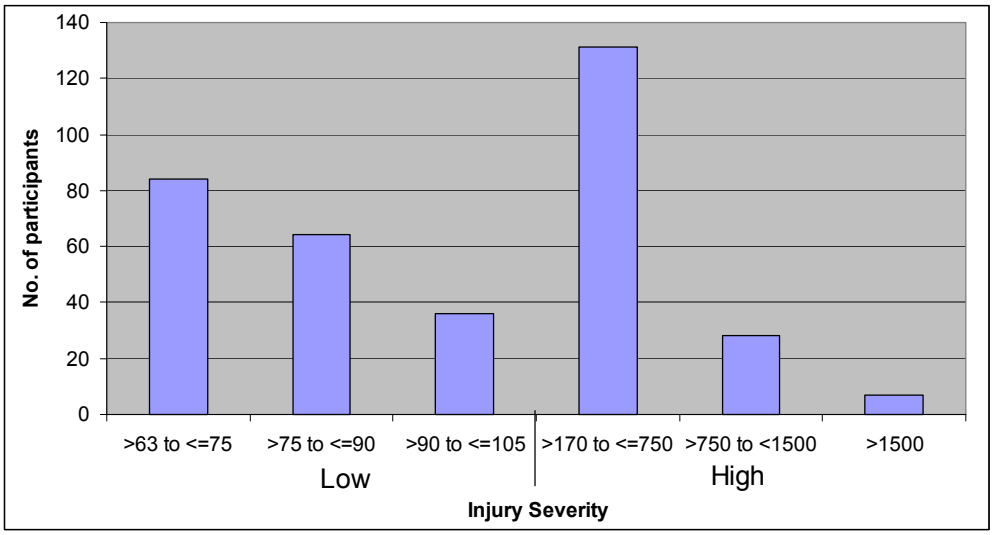


Figure 3-4 **Boxplot of distribution of Section 66 case estimate severity measure for high and low severity groups in each pathway type (reduced sample for Weekly Benefits, N= 239)**

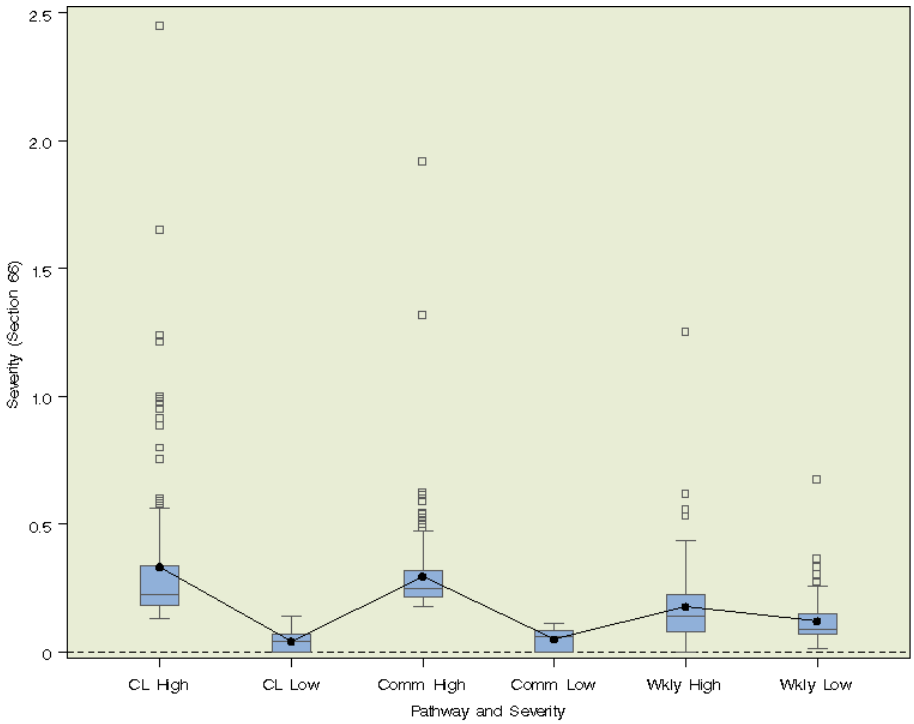


Figure 3-5 Boxplot of distribution of Number of Days paid severity measure for high and low severity groups in each pathway type (reduced sample for Weekly Benefits, N= 239)

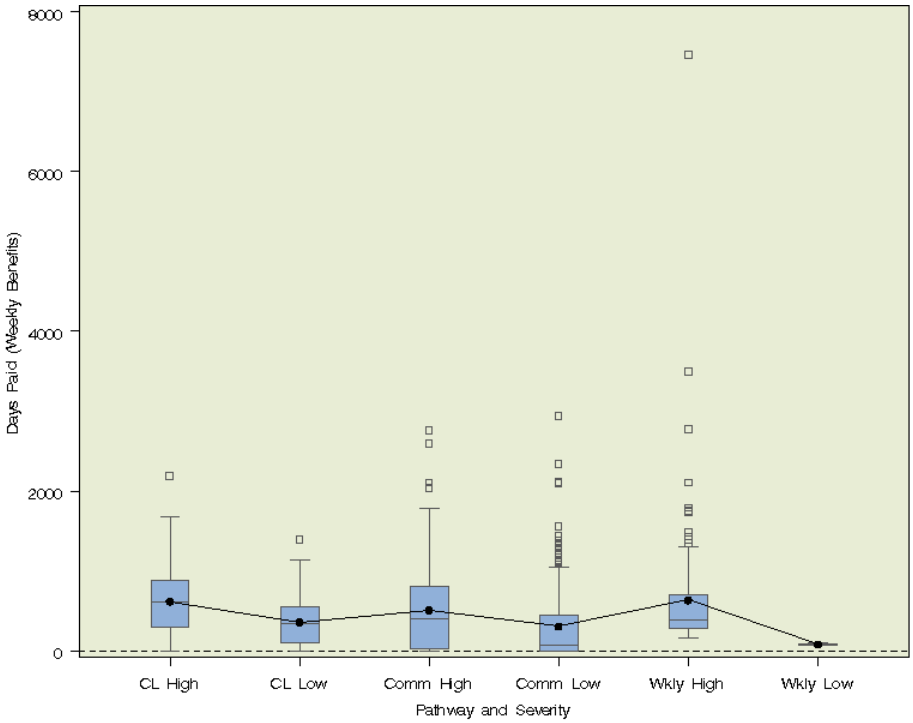
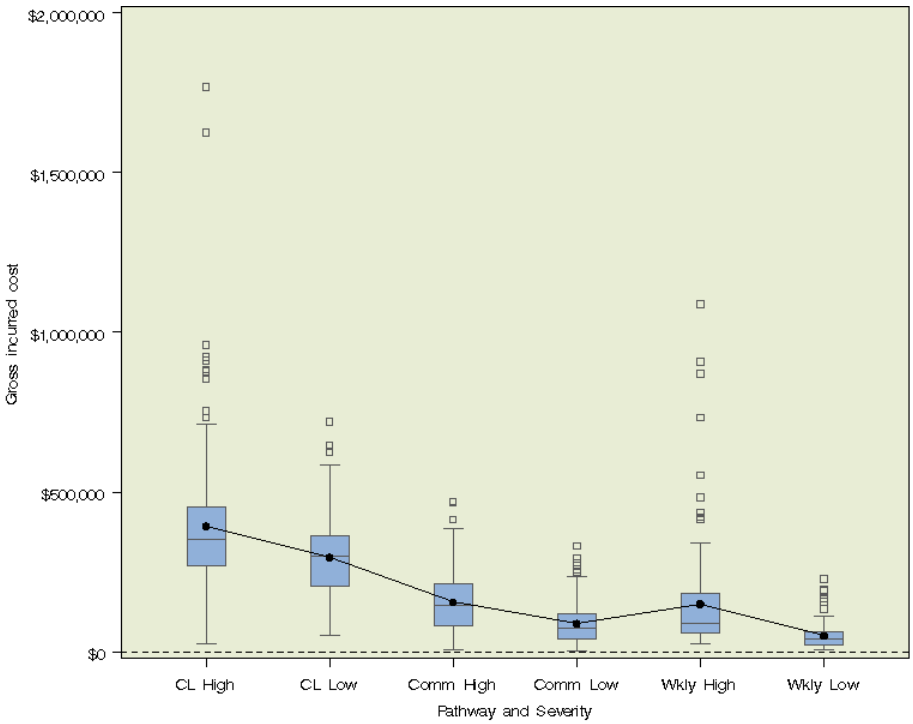


Figure 3-6 Boxplot of distribution of Gross Incurred Cost severity measure for High and Low severity groups in each pathway type (reduced sample for Weekly Benefits, N= 239)



3.4 Final Sample for Time Since Claim Closure

The distribution of the sample for the time since closure measure is presented in the figures below (Figure 3-7 to Figure 3-9). As the data show, within each pathway there was a reasonable spread across the sample frame categories.

Figure 3-7 Distribution of Common Law participants across the range of Time Since Claim Closure

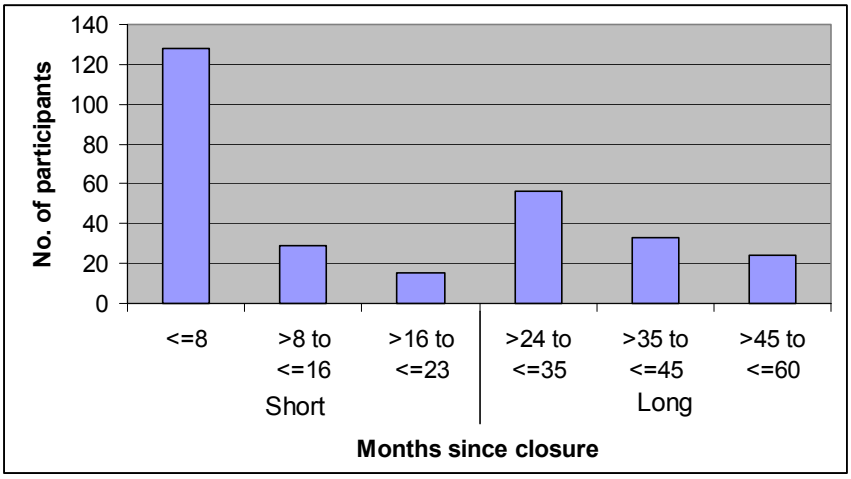


Figure 3-8 Distribution of Commutations participants across the range of Time Since Claim Closure

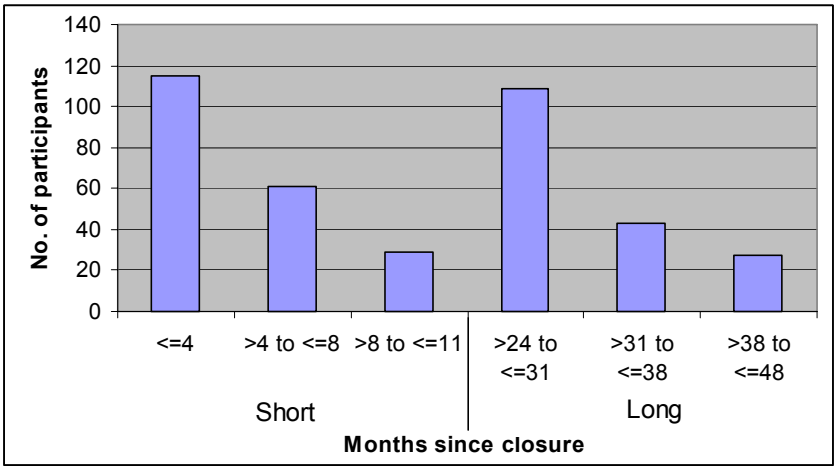


Figure 3-9 Distribution of Weekly Benefits participants across the range of Time Since Claim Closure

4 Results – Descriptive Analysis

The descriptive analysis of the results has been divided into five sections: health, return to work, social, financial, and claims and rehabilitation experience.

For each outcome within these domains results are described for overall scores by compensation pathway types and then injury severity and time since claim closure by pathway.

In the following sections, tables are presented giving results for each aspect of the outcome of interest and participants' claims and rehabilitation experience. These tables provide results for overall mean scores or percentages as well as by compensation pathway. Where appropriate, scores for the impact of injury severity and time since claim closure are also provided. Otherwise these tables have been included in Appendix 4 of this report.

All tables include a "Total" row which displays the overall score and the sample for each item or subcategory in the "All" column. Some tables in this section also include a row titled "All" which provides the total sample for each pathway group. For those tables that report multi-response items where participants could respond to more than one answer, the number of responses to a question is indicated for each group and overall in brackets at the top of each column. The number of participants that responded to each item is then displayed under the "N" column in the table. This number is provided in terms of each pathway and overall.

As indicated earlier, the descriptive analyses are intended to provide non-statistical interpretation of the results observed. No statistical inferences are intended, and, in general, differences meaningful in the context of the current study's research questions are identified. This means that some small differences which might be significant with statistical tests (given the large sample size) might not considered worthy of note. As indicated earlier, as a guard against over interpretation, in general, differences of greater than 10% were considered noteworthy.

When considering compensation pathway based differences , it should be recalled that the measurement of injury severity differed for the Weekly Benefits group from that used for the Common Law and Commutations groups (See Section 2.3). Purposeful sampling was successfully used to recruit Weekly Benefits participants from the more severe end of the spectrum, so that even the so-called low severity Weekly Benefits participants were of a high minimum severity threshold. Thus, although not able to be directly matched for severity, overlap was likely in the severity distributions of the three pathway sample, suggesting that credible comparisons can be made between pathway outcomes overall. However,

when considering pathway based differences in severity, it is entirely possible that when different patterns of findings were observed, these may reflect measurement differences rather than reliable trends. They have been described in the report of findings to investigate whether, with the available measures, any preliminary indications of important differences in the influence of severity might emerge.

Comparisons to normative and other sample data are only available for certain outcome variables.

Table 4-1 Summary of factors to be considered in the interpretation of results

Factors to be considered	Considerations when interpreting results
Self-report of process	Responses provided in the survey are the perceptions held by those who were exposed to the compensation system and the processes within it.
Recall bias	Recall bias is a possibility due to the retrospective recall of participants' claims and rehabilitation experience.
Cross-sectional	This study is cross-sectional in nature so the direction of causation is not clear.
Descriptive analyses	Provide non-statistical interpretation of the results observed. No statistical inferences are intended, and, in general, differences of greater than 10% were considered noteworthy. Where the *impact* of an independent variable (eg. pathway) on a given outcome (eg. RTW) is reported, this is a technical use of the word *impact*, referring to differences in outcome observed with different levels of the independent variable not a causal relationship.

4.1 Health Outcomes

4.1.1 General Health

General health was assessed using the SF-1, a sub-scale of the SF-36 (see Section C of the questionnaire (Appendix 5). Scores were compared to those reported for the Australian population (NSW Health Survey, 1997/1998; National Health Survey, 2001). For these and other comparisons see Section 4.2.

4.1.1.1 General health overall and by compensation pathway

Table 4-2 shows that over half (53%) of the sample (N = 631) rated their health, in general, at the poorer end of the spectrum (i.e. poor and fair). Only 4% of the sample rated their health as 'excellent'. Of the three claimant

groups, Weekly Benefits claimants most commonly reported better general health, with a majority (61%) reporting that their health was 'good', 'very good' or 'excellent'. In contrast, only a minority of Commutations (42%) and Common Law (37%) participants reported at least good health.

4.1.1.2 General health by groups

From Table 4-2 it is also evident that low injury severity claimants (50%) were slightly more likely to report 'good', 'very good' or 'excellent' compared with high severity claimants (44%). This pattern was evident among Weekly Benefits participants and among Commutations participants. This pattern was not apparent for the Common Law group, with low severity Common Law participants more likely to report poor health.

There was very little impact of time since claim closure on ratings of general health (Table 4-2). The type of compensation pathway did not have any noticeable effect on this result.

Table 4-2 General Health (SF-1)*

SF-1 General health			Common Law		Commutations		Weekly Benefit		All	
			%	N	%	N	%	N	%	N
			(N = 285)		(N = 386)		(N = 350)		(N = 1021)	
Poor		*Total*	*21.8*	*62*	*19.4*	*75*	*12.6*	*44*	*17.7*	*181*
	Severity	High	19.9	29	23.3	42	15.7	26	19.7	97
		Low	23.7	33	16.0	33	9.8	18	15.9	84
	Time Since Closure	Long	19.5	22	18.4	33	14.0	24	17.1	79
		Short	23.3	40	20.3	42	11.2	20	18.3	102
Fair		*Total*	*41.8*	*119*	*38.9*	*150*	*26.9*	*94*	*35.6*	*363*
	Severity	High	38.4	56	39.4	71	31.9	53	36.6	180
		Low	45.3	63	38.4	79	22.3	41	34.6	183
	Time Since Closure	Long	44.3	50	42.5	76	24.6	42	36.3	168
		Short	40.1	69	35.8	74	29.1	52	35.0	195
Good		*Total*	*27.7*	*79*	*28.2*	*109*	*36.0*	*126*	*30.8*	*314*
	Severity	High	29.5	43	25.6	46	37.4	62	30.7	151
		Low	25.9	36	30.6	63	34.8	64	30.8	163
	Time Since Closure	Long	23.9	27	27.9	50	35.1	60	29.6	137
		Short	30.2	52	28.5	59	36.9	66	31.7	177
Very good		*Total*	*7.0*	*20*	*10.4*	*40*	*18.3*	*64*	*12.1*	*124*
	Severity	High	10.3	15	7.8	14	11.5	19	9.8	48
		Low	3.6	5	12.6	26	24.5	45	14.4	76
	Time Since Closure	Long	10.6	12	7.8	14	20.5	35	13.2	61
		Short	4.7	8	12.6	26	16.2	29	11.3	63
Excellent		*Total*	*1.8*	*5*	*3.1*	*12*	*6.3*	*22*	*3.8*	*39*
	Severity	High	2.1	3	3.9	7	3.6	6	3.3	16
		Low	1.4	2	2.4	5	8.7	16	4.4	23
	Time Since Closure	Long	1.8	2	3.4	6	5.9	10	3.9	18
		Short	1.7	3	2.9	6	6.7	12	3.8	21

* Percentages are expressed as percentages of column total for each category or subcategory

4.1.2 Physical and Mental Component Scores

The observed mean Physical Component Score (PCS) for the current sample was 35.9 (SD = 10.7) (Table 4-3). The mean observed Mental Component Score (MCS) for the current sample was 42 (SD = 13.3).

This table also illustrates that neither injury severity or time since claim closure had any major impact on both the PCS and MCS.

Table 4-3 SF-36 Physical and Mental Component Scores[5]

			Common Law			Commutations			Weekly Benefit			All		
			Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
PCS		*Total*	*33.5*	*9.3*	*193*	*34.4*	*10.1*	*233*	*39.9*	*11.5*	*205*	*35.9*	*10.7*	*631*
	Severity	High	34.1	9.9	101	31.5	8.5	102	37.6	10.7	102	34.4	10.0	305
		Low	32.8	8.6	92	36.6	10.8	131	42.3	11.9	103	37.3	11.2	326
	Time Since Closure	Long	35.1	10.6	75	33.0	10.3	102	39.4	11.6	98	35.9	11.2	275
		Short	32.5	8.2	118	35.4	9.9	131	40.4	11.5	107	36.0	10.4	356
MCS		*Total*	*39.6*	*13.2*	*193*	*42.0*	*13.1*	*233*	*44.4*	*13.3*	*205*	*42.0*	*13.3*	*631*
	Severity	High	40.1	13.1	101	41.6	12.4	102	42.7	13.7	102	41.4	13.1	305
		Low	39.0	13.3	92	42.4	13.7	131	46.1	12.6	103	42.6	13.5	326
	Time Since Closure	Long	41.1	14.7	75	43.8	12.2	102	43.5	13.8	98	42.9	13.5	275
		Short	38.6	12.0	118	40.6	13.7	131	45.2	12.7	107	41.3	13.1	356

4.1.3 Psychological Distress

The Kessler-10 (K-10) scale was used to assess participants' level of psychological distress (see Section E of the questionnaire (Appendix 5). The tables below (Table 4-4 and Table 4-5) contain results for this aspect of participants' health, with comparisons across different compensation pathways, injury severity and time since claim closure.

4.1.3.1 Mean score for psychological distress

Mean scores for the K-10 range from 0 to 50 where a higher score indicates a higher degree of psychological distress. Table 4-4 illustrates that, overall, the mean score for the whole sample was 23.3 (SD = 9.4).

4.1.3.2 Mean score for psychological distress by groups

There were no major differences in psychological distress across different types of compensation pathways (Table 4-4). However, there was a tendency for Weekly Benefits participants to report slightly lower distress ratings, on average, than the other two groups.

There was little difference in psychological distress between those with high severity and low severity injuries (Table 4-4).

Time since claim closure did not influence the degree of psychological distress for the sample on the whole or for those within each pathway of compensation (Table 4-4).

[5] Re-test supplemented 21 Common Law claimants to boost the sample

Table 4-4 Mean Psychological Distress (Kessler 10)

			Common Law			Commutations			Weekly Benefit			All		
			Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Psychological distress		*Total*	25.8	9.2	285	24.2	9.3	386	20.3	8.8	350	23.3	9.4	1021
	Severity	High	25.4	9.2	146	24.6	9.3	180	22.4	9.4	166	24.1	9.3	492
		Low	26.2	9.3	139	23.8	9.4	206	18.3	7.8	184	22.5	9.4	529
	Time Since Closure	Long	25.1	9.9	113	23.2	9.2	179	20.4	9.1	171	22.6	9.5	463
		Short	26.3	8.7	172	25.0	9.4	207	20.1	8.6	179	23.8	9.3	558

4.1.3.3 Groupings for psychological distress

Total scores for the K-10 were classified using categories calculated in the National Health Survey (2001). The groups, and associated total scores were as follows: Low (10-15); Moderate (16-21); High (22-29); Very High (30-50). It is evident from Table 4-5 that, overall, the sample were equally distributed across the four categories of the K-10 grouped measure.

4.1.3.4 Groupings for psychological distress by groups

There were noticeable differences among pathway groups (Table 4-5). The Common Law group most commonly reported 'high' and 'very high' levels of psychological distress compared to Weekly Benefits participants, with the Commutations group falling between the two.

On the whole, there were no major differences in ratings of psychological distress between the high and low injury severity groups. When considering within pathways (Table 4-5), the influence of injury severity on ratings of psychological distress was evident among Weekly Benefits participants but not within the other two groups. High/very high distress was equally likely to be reported by high and low injury severity participants from the Common Law and Commutations groups. Nearly half of the Weekly Benefits participants with high severity injuries also reported high/very high ratings of psychological distress, only about one quarter (27%) of Weekly Benefits participants with low severity injuries reported high/very high levels of psychological distress. This finding suggests either that injury severity is more influential among Weekly Benefits participants in terms of psychological distress or that the measure is a more sensitive one.

Table 4-5 also shows that there was only a slightly lower percentage of participants in the long time since closure group who reported 'high' and 'very high' psychological distress compared with those in the short group.

Table 4-5 Psychological Distress Categories (Kessler 10)*

Psychological distress group			Common Law		Commutations		Weekly Benefit		All	
			%	N	%	N	%	N	%	N
			(N = 285)		(N = 386)		(N = 350)		(N = 1021)	
Low (10-15)		*Total*	*16.1*	*46*	*20.2*	*78*	*36.3*	*127*	*24.6*	*251*
	Severity	High	17.8	26	15.0	27	30.7	51	21.1	104
		Low	14.4	20	24.8	51	41.3	76	27.8	147
	Time Since Closure	Long	23.9	27	23.5	42	35.1	60	27.9	129
		Short	11.1	19	17.4	36	37.4	67	21.9	122
Moderate (16-21)		*Total*	*20.0*	*57*	*25.1*	*97*	*27.1*	*95*	*24.4*	*249*
	Severity	High	19.9	29	31.1	56	22.3	37	24.8	122
		Low	20.1	28	19.9	41	31.5	58	24.0	127
	Time Since Closure	Long	17.7	20	25.1	45	29.8	51	25.1	116
		Short	21.5	37	25.1	52	24.6	44	23.8	133
High (22-29)		*Total*	*28.1*	*80*	*27.5*	*106*	*20.9*	*73*	*25.4*	*259*
	Severity	High	26.7	39	25.6	46	24.7	41	25.6	126
		Low	29.5	41	29.1	60	17.4	32	25.1	133
	Time Since Closure	Long	21.2	24	27.4	49	17.5	30	22.3	103
		Short	32.6	56	27.5	57	24.0	43	28.0	156
Very High (30-50)		*Total*	*35.8*	*102*	*27.2*	*105*	*15.7*	*55*	*25.7*	*262*
	Severity	High	35.6	52	28.3	51	22.3	37	28.5	140
		Low	36.0	50	26.2	54	9.8	18	23.1	122
	Time Since Closure	Long	37.2	42	24.0	43	17.5	30	24.8	115
		Short	34.9	60	30.0	62	14.0	25	26.3	147

* Percentages are expressed as percentages of column total for each category or subcategory

4.1.3.5 Psychological distress compared with National data by sex and age

Participants of 25 years and over in the current study reported higher levels of psychological distress than those found in the National data (National Health Survey, 2001) (Table 4-6). A greater proportion of the study sample reported 'high' and 'very high' distress than the National population sample, and a smaller proportion reported low distress. This trend was stable for both males and females in the current study compared with National levels (National Health Survey, 2001).

Table 4-6 Psychological Distress Compared With National Data[6]

Age	18-24 years		25-34 years		35-44 years		45-54 years		55-64 years		65 - 74 years		75 and over		Total	
Level of psychological distress	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
WorkCover																
Low (10-15)	12	60.0	48	33.8	63	25.7	65	19.6	36	18.2	25	31.6	0	0.0	249	24.5
Moderate (16-21)	4	20.0	39	27.5	56	22.9	71	21.5	53	26.8	24	30.4	1	100.0	248	24.4
High (22-29)	3	15.0	32	22.5	56	22.9	93	28.1	56	28.3	19	24.1	0	0.0	259	25.5
Very High (30-50)	1	5.0	23	16.2	70	28.6	102	30.8	53	26.8	11	13.9	0	0.0	260	25.6
Total	20		142		245		331		198		79		1		1016	
	18-24		25-34		35-44		45-54		55-64		65 - 74		75 and over		Total	
Level of psychological distress	N (' 000)	%	N (' 000)	%	N (' 000	%	N (' 000)	%	N (' 000)	%	N (' 000)	%	N (' 000)	%	N (' 000)	%
National Health Survey																
Low (10-15)	953.9	53.5	1648.5	58.8	1888.2	64.7	1719.8	65.8	1266.3	70.4	956.8	74.5	693	71.0	9126.4	64.3
Moderate (16-21)	539.2	30.2	785.3	28.0	654.8	22.4	564.5	21.6	324.1	18.0	210.2	16.4	187.8	19.2	3265.9	23.0
High (22-29)	219.5	12.3	275.7	9.8	279.7	9.6	210.4	8.0	145.5	8.1	82.3	6.4	70.6	7.2	1283.7	9.0
Very High (30-50)	71.7	4.0	94.4	3.4	98	3.4	120.8	4.6	64.2	3.6	34.7	2.7	24.8	2.5	508.7	3.6
Total	1784.3		2803.9		2920.6		2615.6		1800		1284.1		976.2		14184.7	

4.1.4 Quality of Life

This aspect of participants' health outcome was assessed using the Satisfaction with Life Scale (SWLS). This scale can be seen in Step 4 of the questionnaire entitled "Non-Health Related QOL" (Appendix 5).

4.1.4.1 Mean score for satisfaction with life

The mean score for Satisfaction with Life (SWL) was 15.1 (SD = 9.4) (Table 4-7).

4.1.4.2 Mean score for satisfaction with life by groups

There were no substantial differences in SWL, on average, across compensation pathway groups. As seen in Table 4-7 those who received Common Law payments reported the lowest average score of SWL whilst those who received Weekly Benefits had only a marginally higher SWL mean score, with the Commutations group falling between these two groups.

There was little impact of injury severity and time since claim closure on mean SWL scores, either overall or within pathway groups.

[6] The National Level Data presented in these tables refers to the 2001 National Health Survey. Sample is equal to 1016 due to missing data for calculations of age.

Table 4-7 Mean Satisfaction with Life By Groups

			Common Law			Commutations			Weekly Benefit			All		
			Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Satisfaction with life		*Total*	*13.1*	*6.9*	*285*	*14.6*	*7.1*	*386*	*17.2*	*7.2*	*350*	*15.1*	*7.3*	*1021*
	Severity	High	13.1	6.9	146	14.3	6.8	180	15.5	7.4	166	14.3	7.1	492
		Low	13.2	6.9	139	14.9	7.4	206	18.7	6.7	184	15.8	7.4	529
	Time Since Closure	Long	14.1	7.0	113	15.4	7.3	179	17.2	7.2	171	15.8	7.3	463
		Short	12.5	6.8	172	14.0	6.9	207	17.2	7.3	179	14.5	7.2	558

4.1.4.3 Groupings for satisfaction with life

Total scores for SWL were categorised as described in Section 2.4.

Table 4-8 shows that over half the sample (54%) reported being to some extent dissatisfied with life, compared with 43% who were to some extent satisfied (4% said they were neither satisfied nor dissatisfied).

4.1.4.4 Groupings for satisfaction with life by groups

Table 4-8 reports information about participants' satisfaction with life across the three main groups (i.e. pathway, injury severity and time since claim closure). A greater proportion of those in the lump sum payment groups (i.e. Common Law and Commutations) reported dissatisfaction than those in the Weekly Benefits group. Less than half of the Weekly Benefits group, just over half of Commutations and two thirds of Common Law participants reported some extent of dissatisfaction with life.

On the whole, there was a slight tendency for those with high severity injuries to rate themselves as being in one of the dissatisfied categories of the SWL grouped measure compared with those with low severity injuries. Among the compensation pathway groups this pattern was only evident for Weekly Benefits participants with little impact of injury severity on SWL ratings in the other two groups. A substantially lower proportion of those with low severity (31%) injuries in the Weekly Benefits group reported in the dissatisfied categories of SWL than those from the Weekly Benefits high severity injury group (50%). For Common Law and Commutations participants, very similar proportions of those with high and low severity injuries reported being in the dissatisfied categories. Again, this may reflect a difference between pathways or the relative sensitivity of the severity measure.

There was a slight tendency for those with short time since closure to report dissatisfaction on the SWL scale compared with those in the long time since closure group. This result was also evident within pathway groups.

Table 4-8 Satisfaction with Life Categories By Groups*

Satisfaction with life group			Common Law % (N = 285)	Common Law N	Commutations % (N = 386)	Commutations N	Weekly Benefit % (N = 350)	Weekly Benefit N	All % (N = 1021)	All N
Extremely Dissatisfied (4-7)	*Total*		*24.2*	*69*	*18.7*	*72*	*11.4*	*40*	*17.7*	*181*
	Severity	High	24.7	36	16.7	30	19.3	32	19.9	98
		Low	23.7	33	20.4	42	4.4	8	15.7	83
	Time Since Closure	Long	20.4	23	17.9	32	12.3	21	16.4	76
		Short	26.7	46	19.3	40	10.6	19	18.8	105
Dissatisfied (8-11)	*Total*		*23.9*	*68*	*19.2*	*74*	*14.0*	*49*	*18.7*	*191*
	Severity	High	24.7	36	22.8	41	13.9	23	20.3	100
		Low	23.0	32	16.0	33	14.1	26	17.2	91
	Time Since Closure	Long	20.4	23	15.6	28	11.1	19	15.1	70
		Short	26.2	45	22.2	46	16.8	30	21.7	121
Slightly Dissatisfied (12-15)	*Total*		*18.6*	*53*	*17.6*	*68*	*15.4*	*54*	*17.1*	*175*
	Severity	High	18.5	27	18.3	33	18.1	30	18.3	90
		Low	18.7	26	17.0	35	13.0	24	16.1	85
	Time Since Closure	Long	20.4	23	16.8	30	17.0	29	17.7	82
		Short	17.4	30	18.4	38	14.0	25	16.7	93
Neutral (16)	*Total*		*4.6*	*13*	*3.9*	*15*	*3.7*	*13*	*4.0*	*41*
	Severity	High	3.4	5	2.2	4	2.4	4	2.6	13
		Low	5.8	8	5.3	11	4.9	9	5.3	28
	Time Since Closure	Long	4.4	5	4.5	8	3.5	6	4.1	19
		Short	4.7	8	3.4	7	3.9	7	3.9	22
Slightly Satisfied (17-20)	*Total*		*8.4*	*24*	*16.3*	*63*	*14.9*	*52*	*13.6*	*139*
	Severity	High	8.9	13	18.3	33	14.5	24	14.2	70
		Low	7.9	11	14.6	30	15.2	28	13.0	69
	Time Since Closure	Long	12.4	14	17.3	31	14.0	24	14.9	69
		Short	5.8	10	15.5	32	15.6	28	12.5	70
Satisfied (21-24)	*Total*		*14.7*	*42*	*13.7*	*53*	*24.6*	*86*	*17.7*	*181*
	Severity	High	14.4	21	13.3	24	18.7	31	15.5	76
		Low	15.1	21	14.1	29	29.9	55	19.9	105
	Time Since Closure	Long	14.2	16	12.9	23	27.5	47	18.6	86
		Short	15.1	26	14.5	30	21.8	39	17.0	95
Extremely Satisfied (25-28)	*Total*		*5.6*	*16*	*10.6*	*41*	*16.0*	*56*	*11.1*	*113*
	Severity	High	5.5	8	8.3	15	13.3	22	9.2	45
		Low	5.8	8	12.6	26	18.5	34	12.9	68
	Time Since Closure	Long	8.0	9	15.1	27	14.6	25	13.2	61
		Short	4.1	7	6.8	14	17.3	31	9.3	52

* Percentages are expressed as percentages of column total for each category or subcategory

4.1.5 Pain

Participants' experience of pain was measured using the SF-36 (Bodily Pain) and the Medical Outcomes Study (MOS) pain measures (See Section 2.4 and Section D in Appendix 5). The SF-36 subscale is reported in Appendix 4 Table A5 and as part of the SF-36 Physical Component Score. Below, pain frequency and duration measures from the MOS are described.

4.1.5.1 Pain frequency

The majority (71%) of the sample who responded to this item reported experiencing pain 'very often' during the four weeks prior to the interview (Table 4-9).

4.1.5.2 Groupings for frequency of pain by groups

Those who received lump sum payments (i.e. Common Law and Commutation participants) were more likely to report pain as being 'very often' and much less likely to report their pain as occurring 'not very often' compared with those in the Weekly Benefits group (Table 4-9).

Few differences were seen overall between participants with high and low severity injuries for reported frequency of pain. Considering differences between pathway groups only participants with high severity injuries in the Weekly Benefits group seemed more likely to report pain as being 'very often' compared with those with low severity injuries in that group.

No noticeable impact was found for reported pain frequency when the time since claim closure was considered. This was also the case within the types of compensation pathways.

Table 4-9 Frequency of Pain by Pathway and Severity*

Pain frequency			Common Law		Commutations		Weekly Benefit		All	
			%	N	%	N	%	N	%	N
			(N = 274)		(N = 358)		(N = 291)		(N = 923)	
Not very often		*Total*	*12.0*	*33*	*12.6*	*45*	*22.7*	*66*	*15.6*	*144*
	Severity	High	14.4	20	9.1	16	18.8	28	13.8	64
		Low	9.6	13	15.9	29	26.8	38	17.4	80
Fairly often		*Total*	*10.2*	*28*	*14.8*	*53*	*14.8*	*43*	*13.4*	*124*
	Severity	High	10.1	14	13.6	24	12.1	18	12.1	56
		Low	10.4	14	15.9	29	17.6	25	14.8	68
Very often		*Total*	*77.7*	*213*	*72.6*	*260*	*62.5*	*182*	*71.0*	*655*
	Severity	High	75.5	105	77.3	136	69.1	103	74.1	344
		Low	80.0	108	68.1	124	55.6	79	67.8	311

* Percentages are expressed as percentages of column total for each category or subcategory

4.1.5.3 Duration of pain experience

Approximately half (49%) of the entire sample reported that they experienced pain that lasted for 'more than a day' during the four weeks prior to the interview (Table 4-10).

4.1.5.4 Groupings for duration of pain by groups (Table 4-10)

Those in the Weekly Benefits group reported a shorter duration of pain with two in five participants in the Weekly Benefits group reporting pain as lasting 'more than a day' as opposed to over half the participants experiencing this duration of pain in the Common Law and Commutations groups.

Overall, there were few differences in reported duration of pain based on the severity of participants' injuries or the time since their claims had been closed. However, there was a tendency for more of those in the Common Law group with a long time since claim closure (64%) to report pain as lasting 'more than a day' than those with short time since claim closure (48%). This impact of time since claim closure was evident to a lesser degree.

Table 4-10 Duration of Pain Experienced by Groups*

Length of pain experience			Common Law		Commutations		Weekly Benefit		All	
			%	N	%	N	%	N	%	N
			(N = 274)		(N = 358)		(N = 291)		(N = 923)	
Less than an hour		*Total*	*18.3*	*50*	*17.6*	*63*	*29.6*	*86*	*21.6*	*199*
	Severity	High	15.8	22	14.8	26	26.2	39	18.8	87
		Low	20.7	28	20.3	37	33.1	47	24.4	112
Several hours		*Total*	*27.7*	*76*	*30.2*	*108*	*29.6*	*86*	*29.3*	*270*
	Severity	High	26.6	37	28.4	50	30.2	45	28.5	132
		Low	28.9	39	31.9	58	28.9	41	30.1	138
More than a day		*Total*	*54.0*	*148*	*52.2*	*187*	*40.9*	*119*	*49.2*	*454*
	Severity	High	57.6	80	56.8	100	43.6	65	52.8	245
		Low	50.4	68	47.8	87	38.0	54	45.5	209

* Percentages are expressed as percentages of column total for each category or subcategory

4.1.6 Comparison of Health Outcomes (SF-36) with other populations

The aim of these comparisons is to identify ranges of variation on the SF-36 in the Australian general population as well as among those who are chronically ill or have chronic injuries/disabilities (ie. either a chronic general injury, musculo-skeletal injury or non-muscuoloskeletal health problem), bearing in mind the demographic distribution of our sample, particularly with respect to age. This enables the health status reported by claimants in this study to be considered against the context of average population health status in Australia and NSW, as well as against the context of compromised health status of other groups suffering chronic illness. Two types of published data were identified for these comparative purposes: sub samples of the Australian and NSW normative data; and relevant specific samples that had been obtained for a specific research study, including work-related and non-work-related injured samples.

The data sets available for consideration in this section, report the SF-36 measure in a variety of ways. These include proportions of people in each category of the SF-1 (General Health), standardised and unstandardised scores for the 8 subscales (Physical Functioning [PF], Role Physical [RF], Bodily Pain [BP], Social Functioning [SF], Role Emotional [RE], Vitality [V], General Health [GH], Mental Health [MH]) and standardised and unstandardised scores for the composite scales, Physical Component Score (PCS) and the Mental Component Score (MCS). Not all of these variations are available for all published datasets; comparisons therefore were drawn with whatever data were reported. Where the comparison data were standardised, the WorkCover sample data have been standardised to the same base population.

4.1.6.1 Australian Normative Data Comparisons

General health compared with State (NSW) level data by sex

Overall, the current sample reported poorer levels of general health than levels in NSW (NSW Health Survey, 1997) with more than half (53%) of the sample reporting 'poor' or 'fair' health compared to 15% in the NSW population sample. The two samples were equally likely to rate their health as 'good'. However the WorkCover participants were less likely (16%) than the NSW population sample (56%) to rate their health as better than good. This pattern was not affected when considering the sex of the participants and was the case for all compensation pathway groups.

General health compared with National level data by sex

As the levels of self-reported general health are very similar across National (National Health Survey, 1995) and State (NSW Health Survey, 1997) data, comparing with the WorkCover data yielded similar findings to those reported above. As seen in Table 4-11, a greater proportion of the WorkCover sample (53%) rated themselves as having 'fair' or 'poor' health compared with the National population sample (30%).

The WorkCover sample (16%) were also much less likely to report their health as 'better than good' compared with the Australian population sample (54%).

Table 4-11 General Health Compared with National and NSW Level Data[7]

Self-reported general health - Sex	Males % (n)	Females % (n)	Total % (n)
	%	%	%
Poor			
WorkCover	19.5	13.9	17.7
NSW Health Survey	3.3	3.4	3.3
National Health Survey	4.5	3.9	4.2
Fair			
WorkCover	33.4	40.2	35.6
NSW Health Survey	11.9	11.7	11.8
National Health Survey	12.9	12.9	12.9
Good			
WorkCover	30.7	31.0	30.8
NSW Health Survey	29.4	28.2	28.8
National Health Survey	28.6	28.4	28.5
Very Good			
WorkCover	13.0	10.2	12.1
NSW Health Survey	36.2	37.4	36.8
National Health Survey	34.7	35.5	35.1
Excellent			
WorkCover	3.4	4.6	3.8
NSW Health Survey	19.2	19.4	19.3
National Health Survey	19.3	19.3	19.3

Sub scale scores compared with National level data

Figure 4-1 presents the subscale scores for the WorkCover sample compared with the age standardised means for the general Australian population (National Health Survey, 1995.). Although scores presented a similar trend to that of the general population, the current sample reported consistently poorer scores on all subscales of the SF36. Previous research has considered the magnitude of differences between groups in subscale scores (McHorney et al., 1993). According to figures from that work the differences observed between the normative data and the WorkCover sample data on three subscales presented in Figure 4-1 (Role Physical, Bodily Pain and General Health), could be considered at the larger end of the spectrum. Although the present study used standard deviation estimates from the general US population, those estimates and the Australian population scores are comparable, so we can assume that such differences are applicable in the Australian context.

[7] The State Level Data presented in these tables refers to the 1997 NSW Health Survey. National Level Data refers to the 1995 National Health Survey

Physical and Mental Component Scores compared with National level data

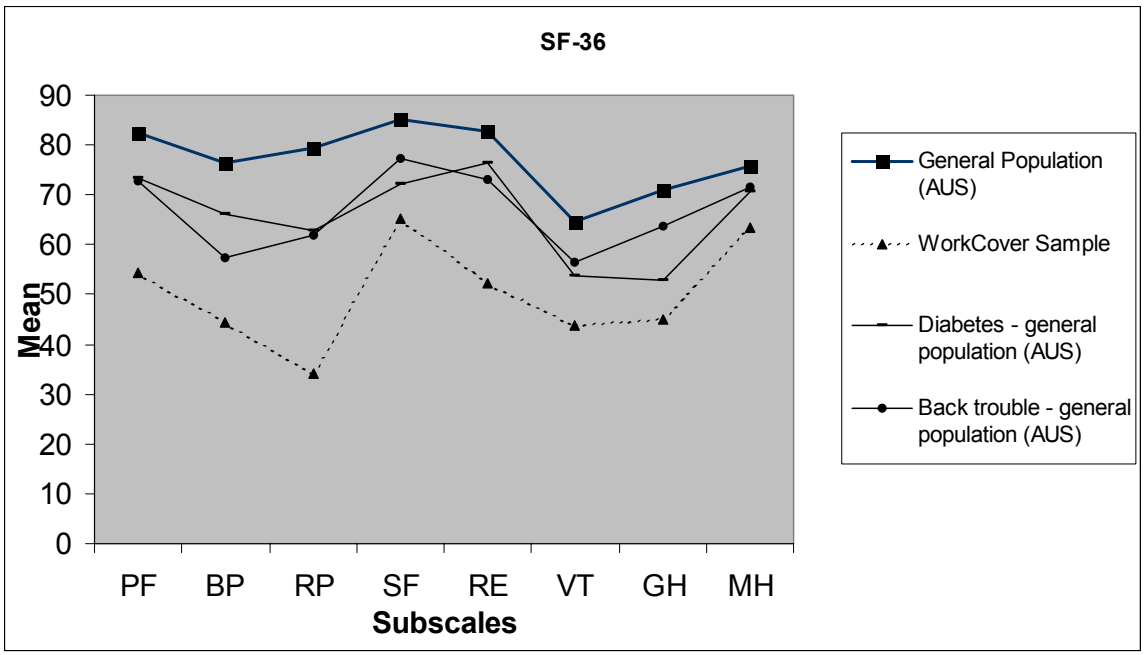
The observed mean Physical Component Score (PCS) for the WorkCover sample was 35.9 (SD = 10.7) (Table 4-3). The age- standardised mean PCS score for the sample overall was 35.5, which was lower than that found in the general Australian population sample (49.6) (National Health Survey, 2000). This was also the case for all pathway groups, with the reduction in health status score most pronounced for the Common Law group (Table 4-3).

The mean observed Mental Component Score (MCS) for the current sample was 42 (SD = 13.3). The age-adjusted mean psychological functioning for the current sample (43.5) was lower than that for the Australian population (M = 50.1) (National Health Survey, 2000). Again, this was also the case for all pathway groups.

4.1.6.2 Comparisons with normative and other data on chronic conditions

Participants in the current study reported poor health status some years after their claims had closed, suggesting that some conditions in the sample were chronic in nature. Therefore, as well as comparing these data to the average health of the general population it was also of interest to consider the extent of health status compromise in the context of other health compromised groups. In terms of normative Australian data, the SF-36 is measured in the National Health Survey (1995) for those with diabetes. Diabetes is a chronic diagnosed non-musculoskeletal disease and was chosen for comparative purposes as it has an age spread more aligned with the current study than other diseases (eg asthma, cardiovascular disease).

Figure 4-1 SF-36 subscale scores compared with National Australian Data[8]



* Includes diabetes mellitus types 1 and 2 and diabetes unspecified

Australian Normative data

Chronic non- musculoskeletal disease Diabetes Mellitus

In 1995, 2.4% of the National sample population had been diagnosed with diabetes mellitus and considered themselves to still have the condition. The majority of these people being 45 years of age and over (mean age: 56.8years).

The mean Physical Component Score (PCS) for the WorkCover sample was 35.9 (SD = 10.7) and the Mental Component Score was 42 (SD = 13.3). Both these scores are lower than those reported in the general Australian population for people who were classed as having doctor diagnosed (and continuing) diabetes (PCS: Mean = 44 , SD = 1.0; MCS: Mean = 46.7, SD = 1.4). Notably, the scores for those with doctor-diagnosed diabetes were lower than for the Australian population on average. Scores of the WorkCover sample were also lower for all eight of the subscale scores, with the same pattern evident across the subscales (Figure 4-1). The scores of the WorkCover sample appeared to be somewhat more similar to the diabetes group for the non-physical scales. In general, this pattern of differences was found for all pathway groups.

[8] National Level Data refers to the 1995 National Health Survey

The current sample's self reported general health (SF-1) is generally comparable to that reported by those with doctor diagnosed diabetes in NSW (NSW Health Survey, 1997/1998), as seen in Table 4-12. This result was consistent for both males and females. The similarities between the two samples on this measure were also seen for all Pathway group, and irrespective of injury severity or time since claim closure.

Table 4-12 Comparison of self reported general health for those with diabetes in NSW and the WorkCover sample

Self-reported general health	Males %	Females %	Total %
Poor			
NSW Health Survey	3.3	3.4	3.3
NSW Health Survey - diabetes	17.4	14.0	16.4
WorkCover sample	19.5	13.9	17.7
Fair			
NSW Health Survey	11.9	11.7	11.8
NSW Health Survey - diabetes	32.6	36.7	34.5
WorkCover sample	33.4	40.2	35.6
Good			
NSW Health Survey	29.4	28.2	28.8
NSW Health Survey - diabetes	29.3	29.1	29.2
WorkCover sample	30.7	31.0	30.8
Very Good			
NSW Health Survey	36.2	37.4	36.8
NSW Health Survey - diabetes	15.2	14.0	14.6
WorkCover sample	13.0	10.2	12.1
Excellent			
NSW Health Survey	19.2	19.4	19.3
NSW Health Survey - diabetes	4.3	5.1	4.6
WorkCover sample	3.4	4.6	3.8

Chronic musculoskeletal disorder – ' back trouble'

Twenty one percent of the those who took part in the National Health Survey reported back and disc problems as long term conditions and the majority of these people fell between the ages of 55 and 64 years. Given that 36% of these conditions were deemed as work-related, we can be confident that these samples are largely comparable.

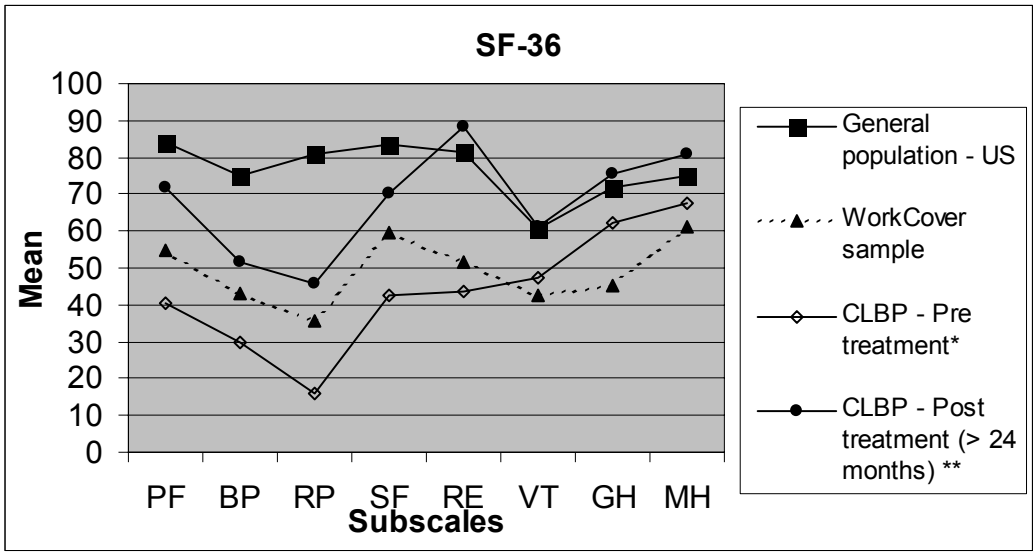
The WorkCover sample had only slightly lower scores on the SF-36 compared with those in the general Australian population with self-reported chronic (ie lasted 6 months or more) 'back troubles', which included disorders of the invertebral disc, back trouble unspecified, and curvature of the spine (PCS: Mean = 43.4, SD = 0.4; MCS: Mean = 48.2, SD = 0.4). As Figure 4-1 shows, the WorkCover sample had lower scores on all subscales. In turn, the 'back troubles' group showed consistently lower scores than the Australian population. In general, this pattern of differences was evident among all Pathway groups, although appearing most pronounced among Common Law participants (see Table 4-3 for PCS and MCS scores for the WorkCover sample).

Comparison with chronically disabled (low back pain) sample in the US

Saal and Saal (2002) conducted a prospective longitudinal study to assess the long-term (minimum of 2 year follow up) outcome of a group of 58 patients with chronic discogenic low back pain who had failed to improve with comprehensive non-operative care and who were subsequently treated with a form of operative therapy. This study, from the US, has been chosen for comparative purposes as it involves a long mean duration of pain and related disability prior to treatment (greater than 6 months) and has a similar mean age (41 years) to that of the WorkCover sample. Two features of the comparison sample are noteworthy: first, the study included both workers compensation and non-compensation cases (around a third of the sample were workers' compensation patients) with no disaggregated data available; second, the published study had a much smaller sample size than the WorkCover sample. To compare the WorkCover sample with this study, scores on the SF-36 were standardised with the international norms used in the US sample. As the duration of post-injury pain and related disability was considered to be chronic prior to treatment, we have provided pre-treatment as well as post-treatment scores (Figure 4-2).

Both the WorkCover sample and the US sample prior to treatment reported lower SF-36 scores than that of the general US population. Improvement was evident in all sub-scale scores for the US sample following treatment. However, physical health scale scores remained well below those of the US population, while general health, role emotional, vitality and mental health scores recovered to the level of the population scores. The physical health subscale scores of the WorkCover sample were higher than the comparison sample prior to treatment, but below the US sample following treatment. The general health and mental health scores reported by the WorkCover sample were consistently lower than the US sample, with the magnitude of the difference increasing after treatment. It is clear that the WorkCover sample had both poorer self-reported physical and mental health than the comparison sample when they were more than 2 years post-treatment.

Figure 4-2 SF-36 subscale scores compared with US chronic disability sample



* Chronic low back pain pre-treatment sample (n = 58)

** Chronic low back pain post -treatment sample (n = 58)

Comparisons with other work-related injured samples

Young athletes after treatment for chronic back pain

Professional athletes are a population who are of working age, commonly suffer serious injury and who are considered to have a high level of motivation for recovery post-injury, making them an interesting group for comparison with other work-related injury groups such as the WorkCover sample. We compared the WorkCover sample to a sample of 19 young athletes who had undergone surgical treatment for chronic back pain in the UK (Debnath et al, 2003). The mean age of this sample was substantially lower (21 years) than that of the WorkCover sample, however given the young age at which professional sports people retire compared with other professions, the age range of this sample is still deemed as appropriate. The mean duration of back pain prior to surgery was 9.4 months. Two features of the comparison study are noteworthy: first, the comparison sample could be considered as a more physically fit sample who would be more likely to recover quickly from injury; second, the comparison sample size was very small.

Eighty one percent of participants returned to their discipline after treatment confirming beliefs about the high RTW rates amongst athletes. The SF-36 scores of the athletes in the published study were reported both pre and post treatment. However, we were unable to discern from the publication how the scores had been standardised. Accordingly we have assumed the use of the International Normative Data based on the US population and have reported scores for the WorkCover sample adjusted to those norms. Both the mean

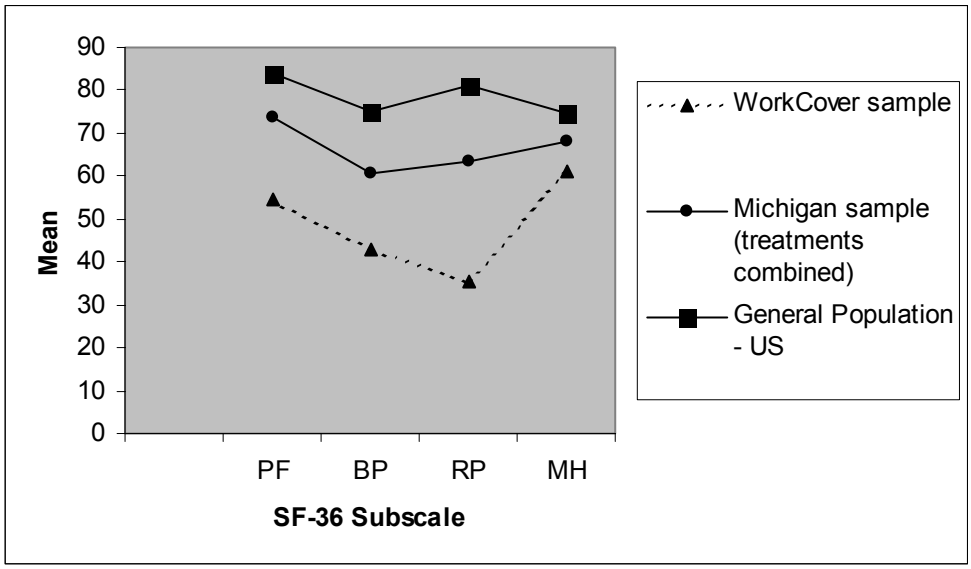
Physical Component Score and the Mental Component Score of the WorkCover sample (PCS = 38.1, SD = 9.9; MCS = 42.7, SD 13.3) were higher than that of the comparison sample of athletes prior to surgery (PCS = 27.1, SD = 5.11, MCS = 39.0, SD = 3.97). The health status scores for the athletes were considerably improved at 2 years post-treatment. Both physical and mental health scores were well above pre- treatment scores and higher than the WorkCover sample scores (PCS = 47.8, SD = 7.75, MCS = 55.4, SD = 6.36). This pattern of differences was evident for all Pathway groups, although appearing to be more marked for the Common Law group. Neither time since claim closure or injury severity had any noticeable impact on the differences in self reported health between these two samples.

Long term outcomes of injured workers involved with workers' compensation

The SF-36 has also been used for studies into the long term outcomes of those involved with workers' compensation. A study conducted by Keyes et al (2001) analysed the health outcomes, return to work, and employment status at two years post injury among a cohort of injured workers who were previously enrolled in a targeted, managed care delivery system and those who were subjected to regular fee for service (FFS) care. Health outcomes were measured using four subscales of the SF-36 (mental health, pain, role functioning, and physical functioning). All participants (374) had a time loss claim that involved 4 or more days of lost work time and were thus classified as claimants within the Michigan State workers' compensation system. Work-related injuries included back and upper body injuries and the mean age of the sample was 39.7. The Michigan sample had a high RTW rate with 90% returning at some point in time and 72% working just prior to the 2 year follow-up interview.

As there were no significant differences in the health outcome measures between the managed care and FFS groups, we have compared the WorkCover sample to the combined cohort in the comparison sample. Again, to compare the WorkCover sample with this study, scores on the SF-36 were standardised with the international norms used in the comparison sample (ie US means). As illustrated in Figure 4-3, overall, the mean scores for physical functioning and pain were poorer amongst the WorkCover sample compared with injured workers in the Michigan sample two years post treatment. When taking types of compensation pathways into account, only those in the Common Law and Commutation groups reported lower scores on the physical subscales (See Appendix 4 Table A6).

Figure 4-3 Comparison of self reported health (SF-36) for injured workers in Michigan State and the WorkCover samples



4.1.7 Summary

- The general health status and psychological health of this sample of claimants was poorer than the national average and the NSW average.
- On the whole, the Weekly Benefits group reported better health outcomes than the Common Law and Commutations claimants. On the more global and psychological outcomes (i.e. general health, psychological distress and satisfaction with life) the Weekly Benefit group reported better outcomes than the Common Law group with the Commutation claimants falling in between the two. On the more physical health related outcomes (i.e. measures of pain and physical health) those in the Weekly Benefit group reported better health than both the Commutation and Common Law groups who reported similar rates of poor physical health
- The severity of claimants' injuries had a specific impact on only a few health outcomes. Participants with Low severity injuries reported better general health and satisfaction with life than those with High severity injuries. The effect of injury severity was more marked in the Weekly Benefit claimants than the other two groups. This may reflect a difference between pathways in terms of influence of injury severity or, alternatively, it may reflect greater sensitivity of the measure of severity available for the Weekly Benefits group
- Time since claim closure had little impact on the health status of the whole sample and within the three compensation pathways.

- Comparisons of health status of the claimant sample, as measured by the SF-36, with that of other populations and samples drawn from populations with chronic conditions showed that:

  1. Those with chronic disease, musculo-skeletal and injury-related conditions report health status that is lower than the population averages. Health status among samples of work-related injury sufferers remains compromised at long term follow-up when compared to national averages, even after treatment. The exception to this finding is the case of elite athletes, a group believed to have exceptional motivation to recover.

  2. In general, the WorkCover sample scores were lower than the scores for those with other chronic conditions, with the reductions in health status compared to other groups more marked for the Common Law group.

  3. There were two notable exceptions to the general finding that the claimant sample had lower health status than other groups with chronic conditions. First, the distribution of the WorkCover Sample across the categories of the SF – 1 (general health) was very similar to the distribution of doctor diagnosed diabetes sufferers from the NSW health survey. Second, long term follow-up (> 2years) of treatment for chronic pain and disability consequent to work-related injury showed that the WorkCover sample had similar or higher scores to pre-treatment comparison groups but lower than post treatment health status of these groups.

  4. The comparison groups reported here differed from the WorkCover sample in a variety of ways (as described earlier), however the findings showed a reasonably consistent pattern. Health status in the claimant sample seems more comparable to other populations and samples with enduring chronic health conditions than average health status reported in the population. While levels of health compromise in the WorkCover sample are in the range of compromised health reported by those with chronic conditions, the claimant sample, in general, reported lower levels of health than others with chronic conditions.

4.2 Return to Work Outcomes

4.2.1 Return to Work Rate

For results on the RTW items described below refer to Table 4-13, Table 4-14 and Table 4-15. For these items see Step 7 of the questionnaire (Appendix 5).

4.2.1.1 Overall RTW rate

Of claimants in the current sample 60% reported that they had returned to work since their claim was closed (Table 4-13).

4.2.1.2 RTW rate by groups

Approximately half of those in the lump sum payment groups (Common Law and Commutations) reported that they had not returned to work at all since their claim was closed, compared with one fifth in the Weekly Benefits group.

Those with low severity injuries were more likely (66%) to report returning to work than those with injuries of high severity (55%) (Table 4-14). Among Weekly Benefits participants, the majority of claimants with low severity reported having returned to work, compared with only around half of high severity Weekly Benefits participants. Among Common Law participants higher rates of RTW were also seen in the presence of low severity injury. There was little effect of injury severity among Commutations participants.

Of the two time since claim closure groups, more of those whose claim had closed a long time ago reported that they had returned to work than those in the short time since closure group (Table 4-15). This pattern was particularly evident in the Common Law and Commutations groups only.

4.2.2 Satisfaction with the RTW Experience

4.2.2.1 Overall Satisfaction with the RTW experience

Of those who had returned to work at some point, a large portion (68%) reported that they were either neutral or satisfied with their RTW experience (Table 4-13).

4.2.2.2 Satisfaction with the RTW experience by groups

Satisfaction with RTW did not differ by pathway with approximately two thirds reporting that they were either neutral or satisfied (Table 4-13). Overall, the severity of injury did not have an impact on participants' satisfaction with their RTW experience (Table 4-14). Only claimants in the Commutations group seemed to be more likely to report dissatisfaction with RTW in the presence of low severity injuries (36%) than in the presence of high severity injuries (25%). The time since claim closure did not have an effect (either overall or within compensation pathway types) on claimants' satisfaction (Table 4-15) with their RTW experience.

4.2.3 Length of Time Before RTW

4.2.3.1 Length of time before RTW overall

Of the participants who had returned to work, half reported that it had taken them less than 6 months to return. Two in five participants reported that it took between 6 months and 3 years, whilst the remaining participants reported a time of greater than 3 years.

4.2.3.2 Length of time before RTW by groups

Those in the Weekly Benefits group (63%) were more likely to report that it took less than 6 months to RTW compared with the other two groups (Table 4-13). Those in the Commutations group (47%) were most likely to report a range of between 6 months and 3 years. Those in the Common Law group more commonly (23%) reported taking more than 3 years to RTW compared with the other two groups, particularly the Weekly Benefits group (3%).

Injury severity also had an effect on the time it took claimants to RTW (Table 4-14) . It was more likely for those with low severity injuries to report less time to RTW than those with high severity injuries. Among the Weekly Benefits group, twice as many participants with low severity injuries reported that RTW took less than 6 months compared with those with high severity injuries. Similarly it was much less likely for Weekly Benefit low severity claimants compared with Weekly Benefit high severity injury claimants to indicate that RTW took between 6 months and 3 years. Common Law participants with low injury severity were also somewhat more likely to RTW more quickly than those with high injury severity. No impact of injury severity was at all apparent among Commutations participants.

Unlike injury severity, the time since claim closure did not have an effect overall on the length of time before participants' returned to work (Table 4-15). However when we consider different compensation pathways it was clear that those in the Commutations group with short time since closure more commonly reported RTW as taking less than 6 months compared with those with long time since closure. In the Common Law group, short time since closure participants were more likely to note that it took between 6 months and 3 years to RTW than those with long time since claim closure.

4.2.4 Durability of RTW (amount of time back at work since claim closed)

Greater than half (59%) of the sample reported that they had either not returned to work at all or had only been back at work for 'some of the time' (Table 4-13). A quarter of the sample reported being back at work 'all of the time' since their claim had closed.

4.2.4.1 Durability of RTW by groups

Participants in the Common Law and Commutations groups were twice as likely to report having not returned to work or only returning to work for 'some of the time' compared with those in the Weekly Benefits group (Table 4-13). As well as this, participants in the Weekly Benefits group were three times as likely to report having been back at work 'all of the time', as those in the other two groups.

When considering the severity of injury, there was a greater likelihood for those with high severity than low severity injuries to report that they had not been back to work at all or only for some of the time since their claim had closed (Table 4-14). This pattern was apparent in the Weekly Benefits group, and largely not apparent in the other two groups.

Time since claim closure had little impact on durability of RTW, either overall or for any of the pathway groups (Table 4-15). The only exception to this was a tendency for Commutation participants whose claims had closed a long time ago to be more likely to have been back at work some or most of the time (42%), compared to Commutation participants whose claims closed more recently (25%).

Table 4-13 Return to Work Variables by Pathway

	Common Law		Commutations		Weekly Benefits		All	
	%	N	%	N	%	N	%	N
Returned to work								
1 yes	53.0	151	49.2	190	78.9	276	60.4	617
2 no	47.0	134	50.8	196	21.1	74	39.6	404
All	100	285	100	386	100	350	100	1021
Satisfaction with RTW experience								
Very dissatisfied	19.2	28	14.8	27	16.7	45	16.7	100
Dissatisfied	14.4	21	16.4	30	16.0	43	15.7	94
Neither satisfied nor dissatisfied	15.1	22	10.4	19	10.8	29	11.7	70
Satisfied	34.9	51	44.3	81	40.2	108	40.1	240
Very satisfied	16.4	24	14.2	26	16.4	44	15.7	94
All	100	146	100	183	100	269	100	598
Length of time before RTW								
Less than 6 months	37.2	55	39.1	72	63.3	171	49.5	298
Between 6 months and 1 year	16.2	24	22.8	42	20.0	54	19.9	120
Between 1 and 3 years	23.7	35	24.5	45	14.1	38	19.6	118
Between 3 and 5 years	12.2	18	6.0	11	1.9	5	5.7	34
Greater than 5 years	10.8	16	7.6	14	0.7	2	5.3	32
All	100	148	100	184	100	270	100	602
Amount of time back at work since claim closure								
None of the time	47.5	135	52.3	202	23.1	78	41.2	415
Some of the time	25.0	71	18.4	71	11.0	37	17.8	179
Most of the time	13.4	38	14.3	55	20.7	70	16.2	163
All of the time	14.1	40	15.0	58	45.3	153	24.9	251
All	100	284	100	386	100	338	100	1008

Table 4-14 Return to Work Variables by Severity

	Common Law				Commutations				Weekly Benefits				All			
	High Severity		Low Severity		High Severity		Low Severity		High Severity		Low Severity		High Severity		Low Severity	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
Returned to work																
1 yes	46.6	68	59.7	83	47.2	85	51.0	105	69.3	115	87.5	161	54.5	268	66.0	349
2 no	53.4	78	40.3	56	52.8	95	49.0	101	30.7	51	12.5	23	45.5	224	34.0	180
All	100	146	100	139	100	180	100	206	100	166	100	184	100	492	100	529
Satisfaction with RTW experience																
Very dissatisfied	18.2	12	20.0	16	10.8	9	18.0	18	18.8	21	15.3	24	16.1	42	17.2	58
Dissatisfied	12.1	8	16.3	13	14.5	12	18.0	18	18.8	21	14.0	22	15.7	41	15.7	53
Neither satisfied nor dissatisfied	12.1	8	17.5	14	6.0	5	14.0	14	10.7	12	10.8	17	9.6	25	13.4	45
Satisfied	33.3	22	36.3	29	55.4	46	35.0	35	34.8	39	44.0	69	41.0	107	39.5	133
Very satisfied	24.2	16	10.0	8	13.3	11	15.0	15	17.0	19	15.9	25	17.6	46	14.2	48
All	100	66	100	80	100	83	100	100	100	112	100	157	100	261	100	337
Length of time before RTW																
Less than 6 months	31.3	21	42.0	34	39.3	33	39.0	39	40.7	46	79.6	125	37.9	100	58.6	198
Between 6 months and 1 year	20.9	14	12.4	10	19.1	16	26.0	26	24.8	28	16.6	26	22.0	58	18.3	62
Between 1 and 3 years	23.9	16	23.5	19	25.0	21	24.0	24	29.2	33	3.2	5	26.5	70	14.2	48
Between 3 and 5 years	9.0	6	14.8	12	6.0	5	6.0	6	3.5	4	0.6	1	5.7	15	5.6	19
Greater than 5 years	14.9	10	7.4	6	10.7	9	5.0	5	1.8	2	.	.	8.0	21	3.3	11
All	100	67	100	81	100	84	100	100	100	113	100	157	100	264	100	338
Amount of time back at work since claim closure																
None of the time	53.4	78	41.3	57	53.9	97	51.0	105	34.6	55	12.9	23	47.4	230	35.4	185
Some of the time	21.2	31	29.0	40	20.6	37	16.5	34	15.1	24	7.3	13	19.0	92	16.6	87
Most of the time	10.3	15	16.7	23	13.3	24	15.1	31	17.0	27	24.0	43	13.6	66	18.6	97
All of the time	15.1	22	13.0	18	12.2	22	17.5	36	33.3	53	55.9	100	20.0	97	29.5	154
All	100	146	100	138	100	180	100	206	100	159	100	179	100	485	100	523

Table 4-15 Return to Work Variables by Time Since Claim Closure

	Common Law				Commutations				Weekly Benefits				All			
	Time Since Closure				Time Since Closure				Time Since Closure				Time Since Closure			
	Long		Short		Long		Short		Long		Short		Long		Short	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
Returned to work																
1 yes	59.3	67	48.8	84	56.4	101	43.0	89	80.1	137	77.7	139	65.9	305	55.9	312
2 no	40.7	46	51.2	88	43.6	78	57.0	118	19.9	34	22.4	40	34.1	158	44.1	246
All	100	113	100	172	100	179	100	207	100	171	100	179	100	463	100	558
Satisfaction with RTW experience																
Very dissatisfied	15.2	10	22.5	18	13.4	13	16.3	14	17.2	23	16.3	22	15.5	46	17.9	54
Dissatisfied	13.6	9	15.0	12	17.5	17	15.1	13	12.7	17	19.3	26	14.5	43	16.9	51
Neither satisfied nor dissatisfied	16.7	11	13.8	11	7.2	7	14.0	12	12.7	17	8.9	12	11.8	35	11.6	35
Satisfied	36.4	24	33.8	27	45.4	44	43.0	37	41.8	56	38.5	52	41.8	124	38.5	116
Very satisfied	18.2	12	15.0	12	16.5	16	11.6	10	15.7	21	17.0	23	16.5	49	15.0	45
All	100	66	100	80	100	97	100	86	100	134	100	135	100	297	100	301
Length of time before RTW																
Less than 6 months	40.3	27	34.6	28	33.7	33	45.4	39	65.7	88	61.0	83	49.5	148	49.5	150
Between 6 months and 1 year	16.4	11	16.1	13	23.5	23	22.1	19	19.4	26	20.6	28	20.1	60	19.8	60
Between 1 and 3 years	13.4	9	32.1	26	25.5	25	23.3	20	11.2	15	16.9	23	16.4	49	22.8	69
Between 3 and 5 years	14.9	10	9.9	8	9.2	9	2.3	2	3.0	4	0.7	1	7.7	23	3.6	11
Greater than 5 years	14.9	10	7.4	6	8.2	8	7.0	6	0.8	1	0.7	1	6.4	19	4.3	13
All	100	67	100	81	100	98	100	86	100	134	100	136	100	299	100	303
Amount of time back at work since claim closure																
None of the time	42.0	47	51.2	88	44.7	80	58.9	122	22.1	36	24.0	42	35.9	163	45.5	252
Some of the time	25.9	29	24.4	42	24.6	44	13.0	27	10.4	17	11.4	20	19.8	90	16.1	89
Most of the time	13.4	15	13.4	23	17.3	31	11.6	24	23.9	39	17.7	31	18.7	85	14.1	78
All of the time	18.8	21	11.1	19	13.4	24	16.4	34	43.6	71	46.9	82	25.6	116	24.4	135
All	100	112	100	172	100	179	100	207	100	163	100	175	100	454	100	554

4.2.5 Employer and Job Status

The survey assessed whether participants had returned to the same employer as before their work injury as well as whether they were carrying out the same duties as they were before their work injury.

4.2.5.1 Employer and job status overall

At the time of interview, over half (57%) of those who responded to this question (N = 519) were working for a different employer and performing different types of work compared to that at the time of injury (Table 4-16). A further 18% of these participants were working for a different employer but carrying out the same type of work. A quarter of this sample were working for the same employer as at the time of injury, however 39% of these people were performing different types of work.

4.2.5.2 Employer and job status by groups

From Table 4-16 it is evident that almost twice as many participants in both of the lump sum compensation groups reported that they were working for a different employer and doing different types of work compared with the Weekly Benefits group. Further, those in the Weekly Benefits group were vastly more likely to report that they were working for the same employer carrying out the same tasks as they were at the time of their injury compared with both the Common Law and Commutations groups.

Injury severity had little impact on this aspect of RTW. Overall, there was a slight tendency for those with high severity injuries to be less frequently employed with the same employer (19%) than those with low severity injuries (29%). While numbers are very small for the Common Law and Commutation groups returning to the same employer, this pattern was apparent in all three pathway groups.

Table 4-16 Employer / Job Status Post Injury by Pathway and Severity*

Employer/job at RTW			Common Law		Commutations		Weekly Benefit		All	
			% (N = 126)	N	% (N = 163)	N	% (N = 230)	N	% (N = 519)	N
Same employer, same job		*Total*	*6.4*	*8*	*1.8*	*3*	*29.6*	*68*	*15.2*	*79*
	Severity	High	10.5	6	1.4	1	17.7	15	10.4	22
		Low	2.9	2	2.2	2	36.6	53	18.6	57
Same employer, different job		*Total*	*10.3*	*13*	*3.1*	*5*	*13.9*	*32*	*9.6*	*50*
	Severity	High	8.8	5	.	.	15.3	13	8.5	18
		Low	11.6	8	5.4	5	13.1	19	10.4	32
Different employer, same job		*Total*	*13.5*	*17*	*19.6*	*32*	*18.7*	*43*	*17.7*	*92*
	Severity	High	17.5	10	22.9	16	15.3	13	18.4	39
		Low	10.1	7	17.2	16	20.7	30	17.3	53
Different employer, different job		*Total*	*69.8*	*88*	*75.5*	*123*	*37.8*	*87*	*57.4*	*298*
	Severity	High	63.2	36	75.7	53	51.8	44	62.7	133
		Low	75.4	52	75.3	70	29.7	43	53.8	165

* Percentages are expressed as percentages of column total for each category or subcategory

4.2.6 Changes in Quality of Work Life from Pre-to –Post – Injury

The responses for quality of work-life questions refer to the current job among those employed at the time of injury. See Table 4-17 for reported changes in quality of work-life.

4.2.6.1 Quality of Work

Two thirds (66%) of the study sample who had returned to work (N = 498) reported that the quality of their work was either the 'same' or 'more'.

Those in the Weekly Benefits group were more likely to report similar or greater quality of work than the Common Law group with the Commutations group between the two. Participants in the Common Law group were more likely to report that their quality of work was 'less' than before their work injury in the presence of low rather than high severity injuries (See Appendix 4 Table A7). A pattern for time since claim closure was also only evident in the Common Law group where those with a Short time since closure were more likely to feel that the quality of their work was 'less' than before their injury (See Appendix 4 Table A8).

4.2.6.2 Motivation to Work

The majority (67%) of the sample reported that their motivation to work was at least the same or better than before their work injury. Those in the Weekly Benefits group (72%) were clearly more likely to feel that their motivation was at least the same compared with the Common Law group (59%).

4.2.6.3 Job Satisfaction

Approximately two thirds (64%) of the sample rated their job satisfaction as the 'same' or 'more' compared with their satisfaction before their injury. This was the case in both the Weekly Benefits (71%) and Commutations groups (65%). However, nearly half (49%) of those in the Common Law group were less satisfied with their current job.

4.2.6.4 Ability to do one's share of the job (i.e. pull one's own weight)

Again, two thirds of the claimants felt that this aspect of their work life was either similar or better than prior to injury. A higher proportion of those in the Weekly Benefits group (76%) rated that their ability to pull their own weight had not changed or had got better than before their injury, compared with the Common Law group (50%). Those in the Commutations group (65%) fell between the other two groups.

Overall, reports of this aspect of quality of life did not change with injury severity level. Paradoxically, those with high severity injuries (64%) in the Common Law group were substantially more likely than those with low severity (39%) to report that their ability to do their share of their job had at least stayed the same (See Appendix 4 Table A7).

4.2.6.5 Worry about Safety

Three in five (59%) participants reported that they worried less about safety in their job than before their work injury. Considering the impact of pathway, those in the Commutations group were clearly more worried about their safety than those in the Common Law group. Worry about safety did not vary by injury severity or time since claim closure (See Appendix 4 Table A7 and Table A8).

4.2.6.6 Concern about being laid off

Over two thirds of the sample were concerned less or the same about being fired compared with their concern previous to the injury. However those in the Commutations group were more worried about being laid off than those in either of the other two groups. Injury severity had an overall impact such that those with high severity (38%) injuries were more likely to report being 'more' worried about being fired than those with low severity (28%) injuries (See Appendix 4 Table A7).

4.2.6.7 Work Self-esteem

The following three characteristic of quality of work-life are grouped measures with a range of 1 to 9 (See Section 2.4 for details on how these categories were grouped).

The overall mean score for participants rated work self-esteem was 7.7 (SD = 2.4). There was no major difference between the compensation pathway groups, injury severity or time since claim closure (See Appendix 4 Table A7 and Table A8).

4.2.6.8 Work Related Relationship Skills

The mean score for reported changes in relationship skills was 4.2 (SD = 1.1). Again, there was no major difference between the compensation pathway groups, injury severity or time since claim closure (See Appendix 4 Table A7 and Table A8)

4.2.6.9 Job Control

The overall mean score for changes in the level of control participants had over their jobs was 6.6 (SD = 1.8). Neither compensation pathway, injury severity or time since claim closure had any noticeable impact on this measure (See Appendix 4 Table A7 and Table A8).

Table 4-17 Changes in Reported Quality of Work Life from Pre-to –Post – Injury by Pathway

	Common Law		Commutations		Weekly Benefits		All	
	%	N	%	N	%	N	%	N
Quality of work								
Less	48.3	58	40.1	63	21.7	48	34	169
Same	31.7	38	35.7	56	54.3	120	43	214
More	20.0	24	24.2	38	24.0	53	23	115
All	100.0	120	100.0	157	100.0	221	100	498
Motivation to work								
Less	41.5	51	33.7	55	27.6	63	33	169
Same	30.1	37	34.4	56	44.7	102	38	195
More	28.5	35	31.9	52	27.6	63	29	150
All	100.0	123	100.0	163	100.0	228	100	514
Job satisfaction								
Less	48.8	61	34.8	56	29.0	66	36	183
Same	26.4	33	28.0	45	40.8	93	33	171
More	24.8	31	37.3	60	30.3	69	31	160
All	100.0	125	100.0	161	100.0	228	100	514
Pull one's weight								
Less	49.6	62	34.6	55	23.8	54	33	171
Same	32.0	40	37.1	59	53.7	122	43	221
More	18.4	23	28.3	45	22.5	51	23	119
All	100.0	125	100.0	159	100.0	227	100	511
Worry about safety								
Less	77.4	96	48.8	79	56.3	129	59	304
Same	9.7	12	24.7	40	24.9	57	21	109
More	12.9	16	26.5	43	18.8	43	20	102
All	100.0	124	100.0	162	100.0	229	100	515
Concerned about being laid off								
Less	44.7	51	32.9	49	29.0	62	34	162
Same	25.4	29	26.9	40	42.5	91	34	160
More	29.8	34	40.3	60	28.5	61	32	155
All	100.0	114	100.0	149	100.0	214	100	477

	Common Law			Commutations			Weekly Benefit			All		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Work self-esteem	7.0	2.4	117	7.8	2.7	153	8.0	2.2	216	7.7	2.4	486
Relationship skills	4.2	1.2	106	4.3	1.1	133	4.2	1.1	200	4.2	1.1	439
Job control	5.8	2.1	110	6.3	1.8	146	6.5	1.6	206	6.3	1.8	462

4.2.7 Return to work rate and changes in quality of work considered in light of NSW and US claimant populations

In the following section the return to work indicators and changes in reported quality of working life in the present study are compared with the rates reported in two other studies of worker's compensation claimants (Campbell 2000, Pransky 2000). When comparing data across different studies it is important to take into account differences in the study samples in terms of selection criteria and sampling strategy, as well as the method of data collection. A major difference between the sample in the present study and those of the Campbell Return to Work Monitor (2000) and the US sample of injured worker's (Pranksy et al., 2000) is that our sample represents a more severe end of the claim severity spectrum than either of the comparator studies. With the US example, the compensation context is also a major variation. The purpose of including these comparisons is simply to provide some context to the RTW findings in the present study.

4.2.7.1 NSW – Campbell Return to Work Monitor (2000)

RTW rate - Of claimants in the current sample 60% reported that they had returned to work since their claim was closed (Table 4-13). This figure is less than the national average of 86% who returned to work for some period, seven to nine months after submitting a claim (Campbell RTW monitor, 2000).

Durability of RTW - The number of participants in the current sample (25%) who had reported durable RTW (i.e. 'all of the time') was substantially lower than the NSW (79%) durable RTW rate for 99/2000 as calculated by Campbell (2000).

Employer and job status - Comparing the results from the current sample and the results reported in Campbell's RTW Monitor (2000), there were clearly fewer claimants in the current sample who returned to work for their original employer (25%) than in the NSW (89%) sample reported in the Monitor. Of those who returned to the same employer, the current sample had fewer people (33%) who carried out the same duties as before being injured compared with the Campbell's (73%) levels. A considerably greater number of participants in the current sample (57%) had returned to a different employer as well as different types of duties compared to NSW (7%) level data as reported in Campbell's RTW monitor (2000).

Table 4-18 Employer / job Status at RTW

Employer/job at RTW	Campbell NSW (2000) (N = 524)	Study sample (N = 519)
Same employer/Same job	73	15
Same employer/Different job	16	9.6
Different employer/Same job	5	17.7
Different employer/Different job	7	57.4

A possible explanation for these apparently great differences could be the time at which people were interviewed. Campbell's Monitor assessed people's RTW experience seven to nine months after submitting a claim, whereas the current sample was interviewed between zero and 5 years after claim closure, with a minimum of 6 months claim duration and a maximum of 5 years claim duration. Therefore the Campbell sample is likely to represent a very different portion of the claim severity spectrum. Perhaps the most obvious impact of the sampling strategy for the Monitor Study is that it is highly unlikely that, with the claim periods specified, neither of the lump sum groups recruited in the current study would have been included. In fact, the pathway of compensation was not a consideration in Campbell's study. The National RTW Monitor "measures durability of RTW independently of claim or employment status" (Campbell, 2000 p.2). Thus, the most likely reason for the major differences between the sample is that the samples are most likely not comparable overall because in the present study lump sum

recipients were vastly over-sampled. Inspection of the return to work rates found in the current study for Weekly Benefits participants indicates a more similar rate to that reported by Campbell. However, it should be noted, that even among the Weekly Benefits participants, the present study purposefully sampled at the more severe end of the spectrum.

4.2.7.2 Comparison to injured US population (Pransky et al, 2000)

Although perceptions of change in the quality of work life had remained at least the same for a large portion of the current sample, satisfaction with working life was consistently lower when compared with the sample of injured workers in the US mentioned previously (Pransky et al, 2000). This was the case for reported quality of work (current sample = 66% ; Pransky sample = 87%), motivation to work (current sample = 67% ; Pransky sample = 85%), job satisfaction (current sample = 64% ; Pransky sample = 84%) and the ability to do one's share on the job (current sample = 66% ; Pransky sample = 84%). Again, differences between the current sample and that of Pransky et al (2000) should be considered when making these comparisons. The US injured workers were surveyed one year after claim closure, whereas a proportion of the present sample had their claim closed for five years. Pransky et al., (2000) selected their sample to focus on injured workers who had sprains and strains, whereas the present sample included a range of injuries. Another major difference between the present sample and the US sample is that it is not clear how the differences in the US workers' compensation context and the method of compensation for this sample has a bearing on quality of working life.

4.2.7.3 Summary of comparisons with NSW and US claimant populations

The rate of return to work and reported quality of working life found in the present study was lower than that reported elsewhere . The return to work rate reported in this report is lower than the NSW level data reported by Campbell in the Return to Work Monitor (2000). Similarly, Pransky et al (2000) report levels of satisfaction with working life after returning to work that were also much higher than those found in the present study. In very large part, these differences in findings reflect differences in sample frames across the studies. The sample in the present study, intentionally, represented a more severe end of the claim severity spectrum than either of the comparator studies. Unfortunately published studies with directly comparable data to the present study have not been undertaken (to the knowledge of Pricewaterhouse-Coopers).

4.2.8 Summary

- Sixty percent of the sample reported that they had either not returned to work at all or had only returned for a short period of time since their claim had closed.
- Over half of those who had returned to work, were at the time of this survey working for a different employer and performing different kinds of duties than at the time of injury.
- The majority of those who had returned to work were either neutral or satisfied with their return to work experience.
- Almost two thirds of those who had returned to work reported that their job satisfaction was the same or more compared with their work satisfaction prior to injury.
- Compensation pathway types had a noticeable impact on return to work outcomes. The Weekly Benefit group reported better return to work outcomes than both the Common Law and Commutation groups on: return to work rate, length of time before return to work, durability of return to work, changes in the type of employer, job description and reported quality of working life from pre to post-injury. Interestingly, the type of compensation pathway did not affect claimant satisfaction with the return to work experience as a whole.
- Injury severity had an impact on the majority of return to work outcomes, whereby those with high severity injuries had more adverse return to work outcomes than those with low severity injuries. This pattern seemed more apparent in the Weekly Benefit group. However injury severity did not affect the claimant satisfaction with the return to work experience. As noted, this finding may reflect a difference between pathways in terms of influence of injury severity or, alternatively, it may reflect greater sensitivity of the measure of severity available for Weekly Benefit participants. Time since claim closure had little impact on the return to work outcomes.

4.3 Social Outcomes

For the items described below see Step 5 of the questionnaire (Appendix 5)

4.3.1 Total Contact with Family and Friends

4.3.1.1 Total contact

As seen in Table 4-19, the study sample reported an apparently high level of total contact with a mean score of 2.8 (SD = 1.4). This means that on average participants had weekly/monthly contact with family and friends through face-to-face, telephone, email and mail contact.

4.3.1.2 Total contact by groups

There were no noticeable differences in total contact between compensation pathway groups. The mean total amount of contact was similar between those who had high and low severity injuries in the current sample. This pattern was stable across different compensation pathways (See Appendix 4 Table A11).

The average amount of total contact that participants had overall did not differ at all between those who had been out of the compensation system for a Short and Long time or by injury severity (See Appendix 4 Table A12).

Table 4-19 Total Scores for Social Contact and Participation by Pathway

	Common Law			Commutations			Weekly Benefit			All		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Total contact	2.9	1.4	285	2.8	1.4	386	2.6	1.3	350	2.8	1.4	1021
Total participation	2.7	1.8	285	3.0	2.1	386	3.4	2.0	350	3.1	2.0	1021

4.3.2 Likelihood and Amount of Support in a Time of Crisis

This multi-response item taken from the General Social Survey (2002) assessed who participants felt they would contact in a time of crisis. The possible options ranged from family, friends and colleagues to charity and religious organisations, and other professionals. Participants were also asked to rate how much support they felt they would receive from these people or entities, with a higher score indicating a greater degree of support (range of 1 to 10).

4.3.2.1 Likelihood of support overall

The types of people participants felt they could contact in a time of crisis is displayed in Table 4-20. In this table the number of participants that responded to each item is displayed under the "N" column in the table. This number is provided for each pathway and overall.

Overall, the most likely person that participants in the study sample reported they would contact was a family member (84%). Almost two in five people said they would contact a friend, and a quarter of the sample reported they would contact a 'health, legal or financial professional'. These people/entities were also reported as providing the most support in a time of crisis, with 'family member' having the highest overall mean score of 9.3 (SD = 1.5). Overall, those who would be contacted during a time of crisis were reported as providing a high degree of support with all mean scores above 5.

4.3.2.2 Likelihood of support by groups

There were few differences in general social contact or support among the compensation pathway groups in the study. Neither the severity of participants' injuries or the time since claim closure had any major effect on either the likelihood or amount of support that would be provided to them during a time of crisis (See Appendix 4 Table A9).

Table 4-20 Likelihood and Amount of Social Support by Pathway*

	Likelihood of Support								Amount of Support											
	Common Law		Commutations		Weekly Benefits		All		Common Law			Commutation			Weekly Benefits			All		
	%	N	%	N	%	N	%	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Friend	30.9	88	38.3	148	41.4	145	37.3	381	8.2	2.1	87	8.3	1.9	148	8.6	1.7	145	8.4	1.9	380
Neighbour	10.5	30	13.7	53	12.0	42	12.2	125	8.0	2.5	30	7.6	2.5	53	7.5	2.4	42	7.6	2.4	125
Family member	83.5	238	81.9	316	87.4	306	84.2	860	9.4	1.4	237	9.2	1.7	313	9.4	1.4	305	9.3	1.5	855
Work colleague	7.0	20	5.2	20	10.3	36	7.4	76	8.2	2.1	20	7.2	2.1	20	7.3	2.2	36	7.5	2.2	76
Community, charity or religious organisation	6.0	17	8.3	32	6.9	24	7.2	73	7.9	2.2	17	7.1	2.3	31	7.6	3.0	24	7.5	2.5	72
Local council or government services	2.8	8	5.2	20	4.3	15	4.2	43	6.0	2.1	8	6.4	2.7	20	4.9	2.3	14	5.8	2.5	42
Health, legal or financial professional	12.6	36	14.5	56	17.7	62	15.1	154	8.5	1.8	35	7.9	2.3	51	7.7	2.2	62	8.0	2.2	148
All	100	437	100	645	100	630	100	1712			434			636			628			1698

*This was a multi-response item so the total sample exceeds 1021

4.3.3 Participation in Social Activities

4.3.3.1 Total Participation

A mean score was calculated for the total number of activities in which participants reported taking part in the three months previous to the survey (range of 0 – 9). The overall mean score for total participation was 3.1 (SD = 2) (Table 4-19). This means that on average this sample participated in three different types of social activities every three months.

Total participation by groups

The mean score for total participation in social activities did not vary to any great degree between compensation pathway, injury severity or time since claim closure groups (See Appendix 4 Table A11 and Table A12) .

4.3.3.2 Types of activities

A very small percentage (8.3%) of participants reported that they did not participate in any social activities (Table 4-21). Three quarters of the study sample reported that they 'went out to a café, restaurant or bar' in the three months previous to the interview. Of those who responded to this item, 82% reported having participated in other activities (these activities have been expanded and presented in Table 4-22). From Table 4-22 it can be seen that almost half (46%) the sample said they 'visited a park, botanic gardens, zoo or theme park', whilst 39% 'attended movies, theatre or concert'.

Table 4-21 shows that there were no substantial differences either overall or between groups for those who did not participate in any social activities and those that reported taking part in the most popular activity, going out to cafes, restaurants or bars. This was also the case when we compared those taking part in no activities to all other activities.

Table 4-21 Comparison of participation in no activities to the most popular and other activities

Activities Participated In			Common Law		Commutations		Weekly Benefit		All	
			% (N = 462)	N	% (N = 634)	N	% (N = 602)	N	% (N = 1698)	N
Did not participate in any activities		*Total*	*10.9*	*31*	*8.0*	*31*	*6.6*	*23*	*8.3*	*85*
	Severity	High	9.6	14	8.9	16	5.4	9	7.9	39
		Low	12.2	17	7.3	15	7.6	14	8.7	46
	Time Since Closure	Long	10.6	12	7.8	14	8.2	14	8.6	40
		Short	11.1	19	8.2	17	5.0	9	8.1	45
Went out to a café, restaurant, or ba		*Total*	*74.7*	*213*	*73.6*	*284*	*78.6*	*275*	*75.6*	*772*
	Severity	High	76.7	112	73.9	133	75.9	126	75.4	371
		Low	72.7	101	73.3	151	81.0	149	75.8	401
	Time Since Closure	Long	71.7	81	74.9	134	80.1	137	76.0	352
		Short	76.7	132	72.5	150	77.1	138	75.3	420
All other activities		*Total*	*76.5*	*218*	*82.6*	*319*	*86.9*	*304*	*82.4*	*841*
	Severity	High	73.3	107	82.8	149	88.0	146	81.7	402
		Low	79.9	111	82.5	170	85.9	158	83.0	439
	Time Since Closure	Long	78.8	89	84.4	151	83.6	143	82.7	383
		Short	75.0	129	81.2	168	89.9	161	82.1	458

Types of activities by groups

Table 4-22 illustrates that, apart from going to a café, restaurant or bar, those in the Common Law group were consistently somewhat less likely to report having participated in social activities compared with the other two groups. In this table the number of responses provided by each group and overall is indicated in brackets at the top of each column. The number of participants that responded to each item is then displayed under the "N" column in the table. This number is provided for each pathway and overall.

Overall, the severity of injury did not seem to have an effect on the types of activities in which the sample participated. Those in the Weekly Benefits group with high severity injuries were somewhat less likely to report participating in 'sport or physical activities' than Weekly Benefits low severity participants. There was little evidence of variation in types of social participation by the injury severity measure within the Common Law or Commutations pathway.

Similarly, there was little impact on the pattern of social participation due to the time since claim closure variable.

Table 4-22 Types of Social Activities by Groups*

Activities Participated In			Common Law		Commutations		Weekly Benefit		All	
			%	N	%	N	%	N	%	N
			(N = 788)		(N = 1199)		(N = 1211)		(N = 3198)	
Did not participate in any activities		*Total*	*10.9*	*31*	*8.0*	*31*	*6.6*	*23*	*8.3*	*85*
	Severity	High	9.6	14	8.9	16	5.4	9	7.9	39
		Low	12.2	17	7.3	15	7.6	14	8.7	46
	Time Since Closure	Long	10.6	12	7.8	14	8.2	14	8.6	40
		Short	11.1	19	8.2	17	5.0	9	8.1	45
Recreational group or cultural group activities		*Total*	*13.7*	*39*	*21.8*	*84*	*21.1*	*74*	*19.3*	*197*
	Severity	High	13.0	19	20.6	37	20.5	34	18.3	90
		Low	14.4	20	22.8	47	21.7	40	20.2	107
	Time Since Closure	Long	18.6	21	20.1	36	18.1	31	19.0	88
		Short	10.5	18	23.2	48	24.0	43	19.5	109
Community or special interest group activities		*Total*	*13.3*	*38*	*18.4*	*71*	*24.3*	*85*	*19.0*	*194*
	Severity	High	12.3	18	16.7	30	22.9	38	17.5	86
		Low	14.4	20	19.9	41	25.5	47	20.4	108
	Time Since Closure	Long	16.8	19	16.8	30	23.4	40	19.2	89
		Short	11.1	19	19.8	41	25.1	45	18.8	105
Church or religious activities		*Total*	*13.3*	*38*	*18.1*	*70*	*19.4*	*68*	*17.2*	*176*
	Severity	High	7.5	11	17.8	32	20.5	34	15.7	77
		Low	19.4	27	18.5	38	18.5	34	18.7	99
	Time Since Closure	Long	18.6	21	16.8	30	16.4	28	17.1	79
		Short	9.9	17	19.3	40	22.4	40	17.4	97
Went out to a café, restaurant, or bar		*Total*	*74.7*	*213*	*73.6*	*284*	*78.6*	*275*	*75.6*	*772*
	Severity	High	76.7	112	73.9	133	75.9	126	75.4	371
		Low	72.7	101	73.3	151	81.0	149	75.8	401
	Time Since Closure	Long	71.7	81	74.9	134	80.1	137	76.0	352
		Short	76.7	132	72.5	150	77.1	138	75.3	420
Took part in sport or physical activities		*Total*	*19.3*	*55*	*26.4*	*102*	*33.7*	*118*	*26.9*	*275*
	Severity	High	21.9	32	22.8	41	28.9	48	24.6	121
		Low	16.6	23	29.6	61	38.0	70	29.1	154
	Time Since Closure	Long	23.0	26	26.8	48	33.3	57	28.3	131
		Short	16.9	29	26.1	54	34.1	61	25.8	144
Attended sporting event as a spectator		*Total*	*32.3*	*92*	*34.2*	*132*	*39.1*	*137*	*35.4*	*361*
	Severity	High	31.5	46	37.8	68	37.4	62	35.8	176
		Low	33.1	46	31.1	64	40.8	75	35.0	185
	Time Since Closure	Long	28.3	32	32.4	58	40.4	69	34.3	159
		Short	34.9	60	35.8	74	38.0	68	36.2	202
Visited a library, museum or art gallery		*Total*	*23.2*	*66*	*28.5*	*110*	*27.4*	*96*	*26.6*	*272*
	Severity	High	24.7	36	31.1	56	27.7	46	28.1	138
		Low	21.6	30	26.2	54	27.2	50	25.3	134
	Time Since Closure	Long	29.2	33	30.2	54	27.5	47	28.9	134
		Short	19.2	33	27.1	56	27.4	49	24.7	138
Attended movies, theatre or concert		*Total*	*33.7*	*96*	*36.5*	*141*	*46.0*	*161*	*39.0*	*398*
	Severity	High	28.8	42	36.1	65	44.0	73	36.6	180
		Low	38.9	54	36.9	76	47.8	88	41.2	218
	Time Since Closure	Long	38.9	44	36.9	66	43.3	74	39.7	184
		Short	30.2	52	36.2	75	48.6	87	38.4	214
Visited a park, botanic gardens, zoo, theme par		*Total*	*42.1*	*120*	*45.1*	*174*	*49.7*	*174*	*45.8*	*468*
	Severity	High	41.8	61	43.3	78	51.8	86	45.7	225
		Low	42.5	59	46.6	96	47.8	88	45.9	243
	Time Since Closure	Long	48.7	55	44.1	79	46.2	79	46.0	213
		Short	37.8	65	45.9	95	53.1	95	45.7	255

* Percentages are expressed as percentages of column total for each category or subcategory

** This was a multi-response item so the total sample exceeds 1021

4.3.4 Summary

- This sample of claimants were participating in a range of social activities, had an apparently high rate of social contact with family and friends, and reported that they would be strong support in a time of crisis.
- Compensation pathway types, injury severity and time since claim closure had little effect on contact with family and friends, support received in a crisis and participation in social activities
- The status of this claimant sample on these social outcomes with respect to national data cannot be determined until the Australian Bureau of Statistics releases the results of the General Social Survey (from where these outcome measures were obtained).

4.4 Financial Outcomes

For the items considered below please refer to Step 8 of the questionnaire (Appendix 5)

4.4.1 Savings Reducing Actions

Dissaving actions, a term used by the ABS General Social Survey from where these questions were obtained, refers to those actions carried out "recently" which had effectively reduced participants' savings. The term 'dissaving action' will be used interchangeably with 'saving reducing actions'. A mean score was calculated for the total number of savings reducing actions that participants reported (range of 0 – 9)

4.4.1.1 Number of financial savings reducing actions

For all participants that answered this item (including those that reported no actions), the overall mean score for the number of actions was 1.4 (SD = 1.4) (Table 4-23).

4.4.1.2 Number of savings reducing actions by groups

The mean score for the number of financial savings reducing actions that participants reported did not vary to any noticeable degree between compensation pathway, injury severity or time since claim closure groups (See Appendix 4 Table A13 and Table A14).

Table 4-23 Number of Financial Savings Reducing Actions and Consequences by Pathway

	Common Law			Commutations			Weekly Benefit			All		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Number of financial dissaving actions	1.7	1.6	281	1.4	1.4	384	1.2	1.3	338	1.4	1.4	1003
Number of financial consequences	3.3	2.5	285	3.0	2.2	386	2.3	2.1	350	2.8	2.3	1021

4.4.2 Types of Savings Reducing Actions

A third of the current sample did not carry out any saving-reducing actions. Of the 699 participants that did carry out a saving reducing action, the most commonly reported savings reducing action was 'drew on accumulated savings/term deposits' (32%), as indicated in Table 4-24. Approximately one in five participants reported that they had 'increased the balance owing on credit cards by $1,000 or more'.

4.4.2.1 Types of savings reducing actions by groups

From Table 4-24 it is clear that those in the Common Law and Commutations groups were less likely to report taking none of the savings reducing actions, compared with those in the Weekly Benefits group. There was also more of a tendency for those in the Common Law and Commutations groups to report that they had drawn upon 'accumulated savings/term deposits' than participants in the Weekly Benefits group.

Overall, injury severity had only a moderate impact on one of the types of savings reducing actions reported whereby those with high severity injuries were more likely to have drawn upon ' accumulated savings/term deposits' than those with low severity injuries (Table 4-24). This pattern seemed to be apparent within pathway groups.

There were few group differences in the effect of time since claim closure on savings reducing activities. The only exception was seen in the Common Law group where it was more likely for those with short time since closure (10%) to report having 'reduced home loan payments' than those in the long time since closure group (23%).

In the following table the number of responses provided by each group and overall is indicated in brackets at the top of each column. The number of participants that responded to each item is then displayed under the "N" column in the table. This number is provided for each pathway and overall.

Table 4-24 Types of Financial Savings Reducing Actions Taken by Groups*

Dissaving Actions			Common Law		Commutations		Weekly Benefit		All	
			% (N = 536)	N	% (N = 657)	N	% (N = 546)	N	% (N = 1379)**	N
Reduced home loan payments		*Total*	*17.9*	*51*	*14.0*	*54*	*12.3*	*43*	*14.5*	*148*
	Severity	High	15.8	23	16.7	30	10.2	17	14.2	70
		Low	20.1	28	11.7	24	14.1	26	14.7	78
	Time Since Closure	Long	9.7	11	11.2	20	13.5	23	11.7	54
		Short	23.3	40	16.4	34	11.2	20	16.9	94
Drew on accumulated savings/term deposits		*Total*	*43.5*	*124*	*38.6*	*149*	*25.4*	*89*	*35.5*	*362*
	Severity	High	45.2	66	44.4	80	30.7	51	40.0	197
		Low	41.7	58	33.5	69	20.7	38	31.2	165
	Time Since Closure	Long	43.4	49	38.6	69	27.5	47	35.6	165
		Short	43.6	75	38.7	80	23.5	42	35.3	197
Increased the balance owing on credit cards by $1,000 or more		*Total*	*24.2*	*69*	*23.1*	*89*	*23.7*	*83*	*23.6*	*241*
	Severity	High	25.3	37	25.6	46	25.9	43	25.6	126
		Low	23.0	32	20.9	43	21.7	40	21.7	115
	Time Since Closure	Long	23.0	26	21.2	38	22.2	38	22.0	102
		Short	25.0	43	24.6	51	25.1	45	24.9	139
Entered into a loan agreement with family/friends		*Total*	*11.9*	*34*	*10.9*	*42*	*10.6*	*37*	*11.1*	*113*
	Severity	High	12.3	18	10.6	19	13.3	22	12.0	59
		Low	11.5	16	11.2	23	8.2	15	10.2	54
	Time Since Closure	Long	13.3	15	10.6	19	12.3	21	11.9	55
		Short	11.1	19	11.1	23	8.9	16	10.4	58
Took out a personal loan		*Total*	*17.5*	*50*	*12.7*	*49*	*14.3*	*50*	*14.6*	*149*
	Severity	High	17.1	25	15.6	28	13.3	22	15.2	75
		Low	18.0	25	10.2	21	15.2	28	14.0	74
	Time Since Closure	Long	17.7	20	12.9	23	13.5	23	14.3	66
		Short	17.4	30	12.6	26	15.1	27	14.9	83
Sold household goods or jewellery		*Total*	*9.8*	*28*	*7.3*	*28*	*6.9*	*24*	*7.8*	*80*
	Severity	High	11.6	17	8.3	15	10.8	18	10.2	50
		Low	7.9	11	6.3	13	3.3	6	5.7	30
	Time Since Closure	Long	10.6	12	8.4	15	6.4	11	8.2	38
		Short	9.3	16	6.3	13	7.3	13	7.5	42
Sold shares, bonds or stocks		*Total*	*16.5*	*47*	*15.5*	*60*	*11.7*	*41*	*14.5*	*148*
	Severity	High	15.8	23	17.2	31	16.3	27	16.5	81
		Low	17.3	24	14.1	29	7.6	14	12.7	67
	Time Since Closure	Long	14.2	16	17.3	31	12.9	22	14.9	69
		Short	18.0	31	14.0	29	10.6	19	14.2	79
Sold other assetts		*Total*	*12.6*	*36*	*12.4*	*48*	*6.6*	*23*	*10.5*	*107*
	Severity	High	8.9	13	13.3	24	8.4	14	10.4	51
		Low	16.6	23	11.7	24	4.9	9	10.6	56
	Time Since Closure	Long	14.2	16	7.8	14	6.4	11	8.9	41
		Short	11.6	20	16.4	34	6.7	12	11.8	66
Other action taken		*Total*	*9.1*	*26*	*7.5*	*29*	*4.0*	*14*	*6.8*	*69*
	Severity	High	7.5	11	8.3	15	3.6	6	6.5	32
		Low	10.8	15	6.8	14	4.4	8	7.0	37
	Time Since Closure	Long	8.0	9	5.0	9	4.1	7	5.4	25
		Short	9.9	17	9.7	20	3.9	7	7.9	44
No/none of these actions taken		*Total*	*24.9*	*71*	*28.2*	*109*	*40.6*	*142*	*31.5*	*322*
	Severity	High	25.3	37	24.4	44	38.6	64	29.5	145
		Low	24.5	34	31.6	65	42.4	78	33.5	177
	Time Since Closure	Long	28.3	32	30.2	54	38.6	66	32.8	152
		Short	22.7	39	26.6	55	42.5	76	30.5	170

* Percentages are expressed as percentages of column total for each category or subcategory

** This was a multi-response item so the total sample exceeds 1021

4.4.3 Financial/Social Consequences of the Work Injury

4.4.3.1 Number of consequences

A mean score was calculated for the total number of reported financial and social consequences as a result of participants' injuries (range of 1 – 14). Table 4-23 reports that the overall mean score for the number of consequences for participants or their families was 2.8 (SD = 2.3). Table 4-23 describes the distribution of financial/social consequences within the sample.

4.4.3.2 Number of consequences by groups

The mean score for the number of consequences that participants reported did not vary to any noticeable degree between compensation pathway, injury severity or time since claim closure groups (See Appendix 4 Table A13 and Table A14).

4.4.4 Types of Financial/Social Consequences

Almost two thirds of the study sample reported that they had 'dipped into savings' as a result of their work injury (Table 4-25).

Over half of the current sample stated that they had problems paying bills, whilst a third (36%) of the sample reported that they had sold their car 'or other belongings'. Close to a quarter of the claimants also reported that their 'husband/wife/partner went to work' and that they 'drank more alcohol' as a consequence of the injury.

4.4.4.1 Types of financial/social consequences by groups

Table 4-25 also illustrates the types of consequences of injuries across all sampling groups. Overall, the likelihood of participants reporting consequences was greater for those with high severity than low severity injuries. In the Weekly Benefits group those with high severity injuries were more likely to report a consequence of the work injury on five of the 14 choices provided in the questionnaire. Those in the Commutations group were also more likely to report financial/social consequences if they had high severity as opposed to low severity injuries. The impact of injury severity on reported consequences for Common Law was inconsistent.

The only impact that time since claim closure had on financial/social consequences appeared to be among the Common Law group where those with short time since closure were more likely to report that they had 'dipped into savings' and 'borrowed money from family, friends, lawyer or bank' than those in the long time since closure group (See Appendix 4 Table A15).

Table 4-25 Types of Financial Consequences by Group*

Types of Financial / Social Consequences			Common Law % (N = 941)	Common Law N	Commutations % (N = 1147)	Commutations N	Weekly Benefit % (N = 801)	Weekly Benefit N	All % (N = 2889)	All N
Had a problem payings bills		*Total*	*58.6*	*167*	*58.8*	*227*	*48.9*	*171*	*55.3*	*565*
	Severity	High	56.9	83	65.0	117	56.6	94	59.8	294
		Low	60.4	84	53.4	110	41.9	77	51.2	271
Lost a second job		*Total*	*10.9*	*31*	*12.7*	*49*	*7.7*	*27*	*10.5*	*107*
	Severity	High	9.6	14	13.9	25	8.4	14	10.8	53
		Low	12.2	17	11.7	24	7.1	13	10.2	54
Took over child care duties		*Total*	*20.4*	*58*	*17.1*	*66*	*10.9*	*38*	*15.9*	*162*
	Severity	High	17.8	26	17.2	31	13.3	22	16.1	79
		Low	23.0	32	17.0	35	8.7	16	15.7	83
Husband/wife or partner went to work		*Total*	*30.9*	*88*	*24.6*	*95*	*17.1*	*60*	*23.8*	*243*
	Severity	High	34.3	50	26.1	47	18.7	31	26.0	128
		Low	27.3	38	23.3	48	15.8	29	21.7	115
Child/children went to work		*Total*	*7.7*	*22*	*7.8*	*30*	*3.1*	*11*	*6.2*	*63*
	Severity	High	8.2	12	8.9	16	4.2	7	7.1	35
		Low	7.2	10	6.8	14	2.2	4	5.3	28
Husband/wife or partner took a second job		*Total*	*8.4*	*24*	*4.9*	*19*	*3.7*	*13*	*5.5*	*56*
	Severity	High	8.9	13	7.2	13	5.4	9	7.1	35
		Low	7.9	11	2.9	6	2.2	4	4.0	21
Dipped into savings		*Total*	*68.1*	*194*	*66.6*	*257*	*53.4*	*187*	*62.5*	*638*
	Severity	High	65.8	96	72.2	130	59.6	99	66.1	325
		Low	70.5	98	61.7	127	47.8	88	59.2	313
Borrowed money from family, friends, lawyer or bank		*Total*	*41.8*	*119*	*35.5*	*137*	*33.1*	*116*	*36.4*	*372*
	Severity	High	39.7	58	40.0	72	39.8	66	39.8	196
		Low	43.9	61	31.6	65	27.2	50	33.3	176
Sold car or other belongs		*Total*	*22.8*	*65*	*21.0*	*81*	*11.7*	*41*	*18.3*	*187*
	Severity	High	19.9	29	21.1	38	17.5	29	19.5	96
		Low	25.9	36	20.9	43	6.5	12	17.2	91
Moved to a smaller house or apartment		*Total*	*8.8*	*25*	*10.9*	*42*	*9.1*	*32*	*9.7*	*99*
	Severity	High	8.2	12	12.8	23	15.1	25	12.2	60
		Low	9.4	13	9.2	19	3.8	7	7.4	39
Family or children moved in with relatives		*Total*	*6.3*	*18*	*2.6*	*10*	*4.0*	*14*	*4.1*	*42*
	Severity	High	6.9	10	4.4	8	4.2	7	5.1	25
		Low	5.8	8	1.0	2	3.8	7	3.2	17
Filed bankruptcy		*Total*	*0.7*	*2*	*1.0*	*4*	*0.9*	*3*	*0.9*	*9*
	Severity	High	0.7	1	1.7	3	0.6	1	1.0	5
		Low	0.7	1	0.5	1	1.1	2	0.8	4
Divorced or separated from husband/wife or partner		*Total*	*10.9*	*31*	*11.1*	*43*	*7.4*	*26*	*9.8*	*100*
	Severity	High	11.6	17	10.6	19	9.6	16	10.6	52
		Low	10.1	14	11.7	24	5.4	10	9.1	48
Drank more alcohol		*Total*	*34.0*	*97*	*22.5*	*87*	*17.7*	*62*	*24.1*	*246*
	Severity	High	30.1	44	26.1	47	17.5	29	24.4	120
		Low	38.1	53	19.4	40	17.9	33	23.8	126

* Percentages are expressed as percentages of column total for each category or subcategory

** This was a multi-response item so the total sample exceeds 1021

4.4.5 Current Debt

4.4.5.1 Total of the sample in debt

Current debt included loans (home loan and car/personal loan), interest free purchases and hire purchase agreements. Overall, from Table 4-26 we can see that 66% of the study sample reported that they were in debt. This characteristic did not vary to any great degree when considering the compensation pathway, injury severity or time since claim closure of the participants in the current sample (See Appendix 4 Table A16 and Table A17).

Table 4-26 Total Sample in Debt by Pathway

	Common Law		Commutations		Weekly Benefits		All	
	%	N	%	N	%	N	%	N
Sample in debt								
No	39.0	111	33.9	131	31.1	109	34.4	351
Yes	61.1	174	66.1	255	68.9	241	65.6	670
All	100.0	285	100.0	386	100.0	350	100.0	1021

4.4.5.2 Types of debt

The most common type of debt was 'other consumer debt' which included a range of types of debt that could not be plausibly post-coded. Other common types of debt, as indicated in Table 4-27 included 'home loans' (35%) and 'car loan or personal loan' (23%).

This table provides the number of responses given by each group and overall as indicated in brackets at the top of each column. The number of participants that responded to each item is then displayed under the "N" column in the table. This number is provided for each pathway and overall.

Types of debt by groups

In general, there was little impact of injury severity or time since claim closure across the sample or within pathway groups. The exception to his generalisation related to 'home loan' debt. Among the Weekly Benefits group there was tendency for a greater proportion of those with low severity injuries to report being in debt due to 'home loan' compared with high severity injury participants (Table 4-27). A similar tendency (61%) seemed to be the case among Commutations. Those in the Commutations group with a short time since closure were more likely to report 'home loan' debt than those with long time since closure.

Table 4-27 Types of Debt by Groups*

Types of Debt			Common Law		Commutations		Weekly Benefit		All	
			% (N = 301)	N	% (N = 448)	N	% (N = 429)	N	% (N = 1178)	N
Home loan		*Total*	*30.5*	*87*	*35.8*	*138*	*36.6*	*128*	*34.6*	*353*
	Severity	High	30.1	44	32.8	59	30.7	51	31.3	154
		Low	30.9	43	38.4	79	41.9	77	37.6	199
	Time Since Closure	Long	29.2	33	30.2	54	36.8	63	32.4	150
		Short	31.4	54	40.6	84	36.3	65	36.4	203
Car loan or personal loan		*Total*	*19.0*	*54*	*22.8*	*88*	*26.3*	*92*	*22.9*	*234*
	Severity	High	15.1	22	24.4	44	26.5	44	22.4	110
		Low	23.0	32	21.4	44	26.1	48	23.4	124
	Time Since Closure	Long	19.5	22	24.6	44	26.9	46	24.2	112
		Short	18.6	32	21.3	44	25.7	46	21.9	122
Interest free purchases		*Total*	*8.8*	*25*	*8.6*	*33*	*9.4*	*33*	*8.9*	*91*
	Severity	High	7.5	11	8.9	16	12.1	20	9.6	47
		Low	10.1	14	8.3	17	7.1	13	8.3	44
	Time Since Closure	Long	8.9	10	4.5	8	12.9	22	8.6	40
		Short	8.7	15	12.1	25	6.2	11	9.1	51
Hire purchase agreements		*Total*	*4.2*	*12*	*4.7*	*18*	*5.4*	*19*	*4.8*	*49*
	Severity	High	2.1	3	5.0	9	3.6	6	3.7	18
		Low	6.5	9	4.4	9	7.1	13	5.9	31
	Time Since Closure	Long	4.4	5	2.2	4	7.0	12	4.5	21
		Short	4.1	7	6.8	14	3.9	7	5.0	28
Other consumer debt		*Total*	*43.2*	*123*	*44.3*	*171*	*44.9*	*157*	*44.2*	*451*
	Severity	High	43.2	63	47.2	85	44.6	74	45.1	222
		Low	43.2	60	41.8	86	45.1	83	43.3	229
	Time Since Closure	Long	41.6	47	42.5	76	45.0	77	43.2	200
		Short	44.2	76	45.9	95	44.7	80	45.0	251

* Percentages are expressed as percentages of column total for each category or subcategory

** This was a multi-response item so the total sample exceeds 1021

4.4.6 Use and Satisfaction with the Compensation Lump Sum Payment

Participants were asked at the beginning of the survey whether they had received a lump sum during their claim. Those who reported having received a lump sum were then asked to report on how they used this payment and how satisfied they were with it. As indicated below, participants from each pathway reported having received a lump sum payment. For Common Law claimants, the lump sum was attained through litigation. For Commutation claimants this payment was a negotiated lump sum. For those workers in the Weekly Benefits group who had sustained permanent impairment due to their injury, the payment was a statutory lump sum based on the severity of the injury. As indicated earlier, Weekly Benefits claimants with permanent impairment injuries are more likely to be found at the more severe end of the spectrum for this pathway. Receipt of a statutory lump sum was not used as an exclusion criterion for sampling the Weekly Benefits pathway because it might have biased the sample somewhat, and it was not practical to do so, given the relative frequency of such payments for the severe Weekly Benefits claims. Indeed, the occurrence of a sizeable proportion of the Weekly Benefits group being in receipt of statutory lump sums confirms the achievement of the sampling strategy, namely sampling cases above a high minimum severity threshold for the pathway.

4.4.6.1 Satisfaction with the compensation lump sum payment

Over half (60%) of the study sample reported being either 'dissatisfied' or 'very dissatisfied' with the lump sum payment they had received for their injury. When considering compensation pathway, those in the Commutations group tended to be more likely to report at least dissatisfaction with their lump sum compared to the other two groups (Table 4-28).

Levels of satisfaction with lump sum payment did not vary to any great degree by injury severity or time since closure (See Appendix 4 Table A18 and Table A19).

Table 4-28 Satisfaction with Lump Sum[9]

	Common Law		Commutations		Weekly Benefits		All	
	%	N	%	N	%	N	%	N
Satisfaction with lump sum								
Very dissatisfied	28.7	77	38.0	136	28.0	47	32.8	260
Dissatisfied	24.6	66	28.2	101	25.6	43	26.5	210
Neither satisfied or dissatisfied	14.2	38	13.7	49	16.1	27	14.4	114
Satisfied	27.6	74	17.0	61	28.6	48	23.1	183
Very satisfied	4.9	13	3.1	11	1.8	3	3.4	27

4.4.7 Use of the Compensation Lump Sum Payment

The majority (67%) of participants reported that they used the lump sum payment to 'assist with the cost of daily living' (Table 4-29). Two in five participants reported that they used the payment to pay for part or all of their mortgage, to 'pay off any other type of loan' or to 'put towards some type of investment'.

Those in the Weekly Benefits group were more likely to report having used the payment to assist with daily living costs than those in the Commutations group, with the Common Law group falling between the two. Common Law participants were substantially more likely than those in the Weekly Benefits group and the Commutations group to have reported using the lump sum for some type of investment purposes or to pay off a mortgage or some type of loan.

Overall, neither injury severity or time since claim closure had a noticeable impact on the use of lump sum payments. When considering types of compensation pathways, reported use of settlement were inconsistent (See Appendix 4 Table A20).

[9] Refers only to those who reported that they had received a lump sum payment for their work injury.

In the following table the number of responses provided by each group and overall is indicated in brackets at the top of each column. The number of participants that responded to each item is then displayed under the "N" column in the table. This number is provided for each pathway and overall.

Table 4-29 Use of the Lump Sum Received*

Use of settlement or lump sum			Common Law		Commutations		Weekly Benefit		All	
			%	N	%	N	%	N	%	N
Pay off part/all of your mortage		*Total*	*54.1*	*145*	*34.9*	*125*	*29.8*	*50*	*40.3*	*320*
	Severity	High	57.8	78	39.0	67	31.3	31	43.3	176
		Low	50.4	67	31.2	58	27.5	19	37.1	144
Pay off any other type of loan		*Total*	*47.4*	*127*	*41.1*	*147*	*39.9*	*67*	*42.9*	*341*
	Severity	High	48.9	66	45.3	78	41.4	41	45.6	185
		Low	45.9	61	37.1	69	37.7	26	40.2	156
Put towards some type of investment		*Total*	*60.8*	*163*	*36.0*	*129*	*32.1*	*54*	*43.6*	*346*
	Severity	High	67.4	91	37.8	65	33.3	33	46.6	189
		Low	54.1	72	34.4	64	30.4	21	40.5	157
Assist with the cost of daily living		*Total*	*69.0*	*185*	*60.6*	*217*	*76.2*	*128*	*66.8*	*530*
	Severity	High	68.9	93	65.7	113	57.6	57	64.8	263
		Low	69.2	92	55.9	104	102.9	71	68.8	267
Holiday		*Total*	*23.9*	*64*	*12.8*	*46*	*15.5*	*26*	*17.1*	*136*
	Severity	High	29.6	40	11.6	20	10.1	10	17.2	70
		Low	18.0	24	14.0	26	23.2	16	17.0	66
Put towards a personal business		*Total*	*14.2*	*38*	*7.5*	*27*	*4.8*	*8*	*9.2*	*73*
	Severity	High	11.9	16	10.5	18	7.1	7	10.1	41
		Low	16.5	22	4.8	9	1.4	1	8.2	32
Accommodated Injury		*Total*	*1.9*	*5*	*1.1*	*4*	*0.6*	*1*	*1.3*	*10*
	Severity	High	2.2	3	1.7	3	1.0	1	1.7	7
		Low	1.5	2	0.5	1	.	.	0.8	3
Home Improvements/Repairs		*Total*	*4.1*	*11*	*3.9*	*14*	*2.4*	*4*	*3.7*	*29*
	Severity	High	4.4	6	5.2	9	2.0	2	4.2	17
		Low	3.8	5	2.7	5	2.9	2	3.1	12
Personal Purchases		*Total*	*6.7*	*18*	*5.3*	*19*	*7.7*	*13*	*6.3*	*50*
	Severity	High	4.4	6	6.4	11	10.1	10	6.7	27
		Low	9.0	12	4.3	8	4.3	3	5.9	23
Other		*Total*	*4.9*	*13*	*10.1*	*36*	*14.3*	*24*	*9.2*	*73*
	Severity	High	3.7	5	10.5	18	15.2	15	9.4	38
		Low	6.0	8	9.7	18	13.0	9	9.0	35

* Percentages are expressed as percentages of column total for each category or subcategory

** This was a multi-response item so the total sample exceeds 1021

4.4.8 Summary

- Sixty six percent of the sample were in some form of debt that involved types of cash flow problems and consumer debt including a home loan.
- Two thirds of the sample reported recently taking at least one type of saving-reducing action.

- A large proportion (60%) of those who reported receiving a lump sum payment for their injury were dissatisfied with this settlement, with those in the Commutations group more likely to report dissatisfaction than the other groups. The majority of these participants used their lump sum payment to assist with the cost of their daily living.

- Those with high severity injuries were marginally more likely than those with low severity injuries to have drawn upon savings or term deposits. This pattern seemed more apparent in the Weekly Benefits and Commutations groups. High severity participants were also more likely to report some financial and/or social consequence of their injury than participants with low severity injuries. Again, this result seemed more apparent in the Weekly Benefits group. As noted, this finding may reflect a difference between pathways in terms of influence of injury severity or, alternatively, it may reflect greater sensitivity of the measure of severity available for Weekly Benefit participants.

- Time since claim closure had little effect on savings reducing actions, level of debt and financial and social consequences of workers' compensation.

- The status of this claimant sample on the financial outcomes, measured using questions from the General Social Survey (2002), with respect to national population data cannot be determined until the Australian Bureau of Statistics releases the results of this survey.

4.5 Claims and Rehabilitation Experience

When interpreting the results of this section, it is especially important to bear in mind that responses to the items listed in Step 6 of the questionnaire, are the perceptions of those participants that were exposed to the system and the processes within it.

4.5.1 Knowledge of the System

Respondents were asked to rate the amount of knowledge they had about the compensation system when they first filed for their claim. As can bee seen in Step 6 of the questionnaire (Appendix 5), participants were informed that this question was about knowledge of the kind and amount of compensation they were entitled to, what the process of filing for compensation involved and knowing who they could go to with any questions they may have had. Care was taken to ensure that participants were aware that the question was referring to the time when they first filed for compensation. Over half (60%) of the study sample reported that they had 'no knowledge at all' about the compensation system when they first filed for compensation (Table 4-30).

There were no differences in the degree of knowledge participants had about the compensation system based on compensation pathway, injury severity or the time since claim closure groups (See Appendix 4 Table A21 and Table A22).

Table 4-30 Knowledge of the Compensation System by Pathway

	Common Law		Commutations		Weekly		All	
	%	N	%	N	%	N	%	N
Degree of knowledge								
No knowledge at all	62.1	177	63.5	245	54.6	190	60.1	612
A little knowledge	26.0	74	21.0	81	28.5	99	24.9	254
Some knowledge	9.1	26	12.4	48	13.5	47	11.9	121
A great deal of knowledge	2.1	6	2.3	9	2.9	10	2.5	25
I knew everything I needed to know	0.7	2	0.8	3	0.6	2	0.7	7
All	100	285	100	386	100	348	100	1019

4.5.2 Advice Received During the Compensation Process

Table 4-31 displays the types of people claimants received advice from during the compensation process. This table also provides reports of how satisfied claimants were with the advice received.

4.5.2.1 Types of people that provided advice

By far the most common source of advice was legal advice. More than half (62%) of claimants reported that they had received advice from a lawyer. Other people from whom claimants commonly reported receiving advice included a 'doctor and physician' (38%), 'other medical specialist' (20%) and WorkCover (20%).

4.5.2.2 Types of people that provided advice by groups

Those in the Common Law (76%) and Commutations (70%) groups were far more likely to report having received advice from a lawyer than those in the Weekly Benefits group (42%). It was more common for participants in the Weekly Benefits group to receive advice from an 'employer', compared to the other two groups.

The severity of participants' injuries did not have an effect overall on the sources of advice. However, when considering different compensation pathways, those with low injury severity in the Weekly Benefits group were more likely to receive advice from an 'employer' and less likely to get advice from a lawyer than those with high severity injuries (See Appendix 4 Table A23 and Table A24) .

4.5.3 Satisfaction with Advice Received

Participants were asked to rate their satisfaction with the advice they received from the people identified above. A five point likert scale was used to assess satisfaction, with 0 being 'very dissatisfied' and 4 being 'very satisfied'.

Participants who had gained advice from a medical practitioner or specialist tended to report that they were more satisfied (Mean = 3.05 ; SD = 1) with the advice received than those who had received advice from a lawyer (Mean = 2.2 ; SD = 1.3).

Satisfaction with advice participants' received during the compensation process did not differ across different compensation pathways, by injury severity or time since claim closure (See Appendix 4 Table A23 and Table A24).

Table 4-31 Advice Received During the Compensation Process by Pathway*

	Types of People								Satisfaction with Advice Received											
	Common Law		Commutations		Weekly		All		Common Law			Commutations			Weekly Benefit			All		
	%	N	%	N	%	N	%	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Family	17.2	49	15.8	61	14.3	50	15.67	160	2.9	1.0	49	2.9	0.8	61	3.0	0.7	50	2.9	0.8	160
Friends	13.3	38	10.6	41	11.4	40	11.7	119	2.7	0.9	38	2.8	1.0	41	2.9	0.8	40	2.8	0.9	119
Employer	15.1	43	12.7	49	25.4	89	17.7	181	2.0	1.4	39	2.0	1.5	45	2.5	1.2	82	2.3	1.4	166
Doctor/physician	34.7	99	38.3	148	38.9	136	37.5	383	3.1	1.0	99	3.1	0.9	148	3.0	1.0	136	3.1	1.0	383
Other medical care specialist	15.4	44	20.5	79	23.4	82	20.1	205	3.0	1.0	43	3.1	0.9	75	2.9	1.0	81	3.0	1.0	199
Insurer	8.1	23	7.3	28	14.6	51	10.0	102	2.2	1.3	23	2.1	1.3	28	2.2	1.3	51	2.2	1.3	102
Lawyer	75.8	216	70.2	271	41.7	146	62.0	633	2.7	1.3	213	2.8	1.3	271	2.7	1.3	146	2.8	1.3	630
WorkCover	17.2	49	19.4	75	21.7	76	19.6	200	2.7	1.3	49	2.4	1.3	75	2.9	1.1	76	2.7	1.3	200
Union representative	6.0	17	10.1	39	10.0	35	8.9	91												
Government rehabilitation service	0.7	2	0.5	2	0.9	3	0.7	7												
All		580		793		708		2081			553			744			662			1959

* Levels of satisfaction were not sought for those responses termed "other" in the interview and post-coded

** This was a multi-response item so the total sample exceeds 1021

4.5.4 Satisfaction with the Claims Process

Participants were asked to rate their satisfaction with the process they had to go through to claim for compensation. Table 4-32 shows that more than half (60%) of the sample reported that they were either 'dissatisfied' or 'very dissatisfied' with the process they had to go through to claim for compensation.

4.5.4.1 Satisfaction with the claims process by groups

Those in the Common Law and Commutations groups were clearly more likely to report that they were to some extent dissatisfied with the claims process compared with the Weekly Benefits group.

Overall, neither the severity of participants' injuries nor the time since their claims had closed seemed to have any obvious effect on satisfaction with the claims process. However, the impact of injury severity varied within different compensation pathways. Among the Weekly Benefit participants, those with

high severity injuries tended to be more likely to report being 'dissatisfied' or 'very dissatisfied' with the claims process. Those that were in the Common Law group with high severity injuries in contrast, tended to be less likely to report being 'very dissatisfied' or 'dissatisfied' compared with low injury severity Common Law participants. This finding may reflect that the injury severity measure is differentially sensitive. Time since claim closure did not have an impact on levels of satisfaction overall or within compensation pathway groups.

Table 4-32 Satisfaction with Compensation Claims Process by Groups*

Satisfaction with claims process			Common Law		Commutations		Weekly Benefit		All	
			% (N = 283)	N	% (N = 381)	N	% (N = 342)	N	% (N = 1006)	N
Very dissatisfied with the process		*Total*	*41.3*	*117*	*40.9*	*156*	*26.9*	*92*	*36.3*	*365*
	Severity	High	35.9	52	43.0	77	35.2	57	38.3	186
		Low	47.1	65	39.1	79	19.4	35	34.4	179
	Time Since Closure	Long	39.3	44	42.9	76	24.9	41	35.5	161
		Short	42.7	73	39.2	80	28.8	51	37.0	204
Dissatisfied		*Total*	*26.5*	*75*	*23.1*	*88*	*21.6*	*74*	*23.6*	*237*
	Severity	High	28.3	41	21.8	39	17.3	28	22.2	108
		Low	24.6	34	24.3	49	25.6	46	24.8	129
	Time Since Closure	Long	28.6	32	22.0	39	24.9	41	24.7	112
		Short	25.2	43	24.0	49	18.6	33	22.6	125
Neither satisfied nor dissatisfied with the process		*Total*	*7.8*	*22*	*7.4*	*28*	*9.9*	*34*	*8.4*	*84*
	Severity	High	9.0	13	7.8	14	11.7	19	9.5	46
		Low	6.5	9	6.9	14	8.3	15	7.3	38
	Time Since Closure	Long	8.0	9	6.8	12	8.5	14	7.7	35
		Short	7.6	13	7.8	16	11.3	20	8.9	49
Satisfied		*Total*	*21.2*	*60*	*23.4*	*89*	*31.9*	*109*	*25.7*	*258*
	Severity	High	22.8	33	21.2	38	28.4	46	24.1	117
		Low	19.6	27	25.3	51	35.0	63	27.1	141
	Time Since Closure	Long	21.4	24	21.5	38	33.3	55	25.8	117
		Short	21.1	36	25.0	51	30.5	54	25.5	141
Very satisfied with the process		*Total*	*3.2*	*9*	*5.3*	*20*	*9.7*	*33*	*6.2*	*62*
	Severity	High	4.1	6	6.2	11	7.4	12	6.0	29
		Low	2.2	3	4.5	9	11.7	21	6.4	33
	Time Since Closure	Long	2.7	3	6.8	12	8.5	14	6.4	29
		Short	3.5	6	3.9	8	10.7	19	6.0	33

* Percentages are expressed as percentages of column total for each category or subcategory

4.5.5 Satisfaction with Rehabilitation

As the questionnaire illustrates (Appendix 5), rehabilitation was defined as "the process of helping you recover from your injury and returning to suitable employment". Half of the participants reported that they were either 'dissatisfied' or 'very dissatisfied' with the rehabilitation they received for their work injury (Table 4-33). Less than half (40%) reported as being in some way satisfied with their rehabilitation to any extent, whilst 10% were neither satisfied nor dissatisfied.

Participants in the Common Law and Commutations groups more commonly reported being dissatisfied with their rehabilitation compared with those in the Weekly Benefits group. Neither injury severity or time since claim closure had any noticeable impact on levels of satisfaction overall and when comparing within different compensation pathways (See Appendix 4 Table A25 and Table A26).

Table 4-33 Satisfaction with Rehabilitation by Pathway

	Common Law		Commutations		Weekly		All	
	%	N	%	N	%	N	%	N
Satisfaction with rehabilitation								
Very dissatisfied with the process	32.7	87	40.6	144	21.3	69	31.8	300
Dissatisfied	21.1	56	17.8	63	15.1	49	17.8	168
Neither satisfied nor dissatisfied with the process	9.4	25	9.6	34	10.8	35	10.0	94
Satisfied	24.4	65	23.1	82	34.0	110	27.2	257
Very satisfied with the process	12.4	33	9.0	32	18.8	61	13.3	126
All	100	266	100	355	100	324	100	945

4.5.6 Level of Commitment to RTW

Over half (53%) of the sample (N = 965) stated that the level of commitment from those involved in rehabilitation to return them to work during their rehabilitation was either 'none' or 'a little' (Table 4-34). Commitment was defined as "dedication, motivation and practical assistance" and was classified as being an overall impression rather than being related to commitment from any one specific person.

4.5.6.1 Level of commitment to RTW by groups

Participants in the Weekly Benefits group were clearly less likely to report having received no or little commitment, from those involved in rehabilitation, to RTW compared with both lump sum payment groups (particularly in the Commutations group where two thirds of this group reported 'none' or 'a little' level of commitment to return them to work). Participants' perceptions of the level of commitment from those involved in rehabilitation to their RTW was not obviously affected by injury severity or time since claim closure (See Appendix 4 Table A27 and Table A28).

Table 4-34 Level of Commitment by Rehabilitation to Return To Work by Pathway

	Common Law		Commutations		Weekly		All	
	%	N	%	N	%	N	%	N
Level of commitment								
None	34.9	94	46.1	169	21.3	70	34.5	333
A little	16.4	44	20.4	75	16.7	55	18.0	174
Some	19.0	51	10.4	38	17.0	56	15.0	145
Quite a bit	16.4	44	13.4	49	23.4	77	17.6	170
A great deal	13.4	36	9.8	36	21.6	71	14.8	143
All	100	269	100	367	100	329	100	965

4.5.7 Suitability of the RTW Process

Over half (61%) of the study sample felt that the RTW process was either 'not at all' or only slightly suited to them and their particular work injury (Table 4-35).

4.5.7.1 Suitability of the RTW process by groups

Those in the two lump sum payment groups (i.e. Common Law and Commutations) were noticeably more likely to report that their RTW experience was not or only slightly suited to them and their injury. Overall, both injury severity and time since claim closure had little impact on suitability of RTW. However, considering differences among compensation pathway groups, those in the Common Law group with a short time since closure were more likely to report that their RTW was suited to them and their injury.

Table 4-35 Suitability of the Return To Work Process by Groups*

Suitability of RTW			Common Law		Commutations		Weekly Benefit		All	
			% (N = 255)	N	% (N = 347)	N	% (N = 322)	N	% (N = 924)	N
Not at all suited		*Total*	*49.4*	*126*	*52.7*	*183*	*29.2*	*94*	*43.6*	*403*
	Severity	High	50.4	65	55.4	88	32.5	49	46.0	202
		Low	48.4	61	50.5	95	26.3	45	41.4	201
	Time Since Closure	Long	47.5	47	54.2	91	28.0	44	42.9	182
		Short	50.6	79	51.4	92	30.3	50	44.2	221
A little bit suited		*Total*	*18.4*	*47*	*15.9*	*55*	*18.9*	*61*	*17.6*	*163*
	Severity	High	17.8	23	16.4	26	21.2	32	18.5	81
		Low	19.1	24	15.4	29	17.0	29	16.9	82
	Time Since Closure	Long	12.1	12	15.5	26	17.2	27	15.3	65
		Short	22.4	35	16.2	29	20.6	34	19.6	98
Moderately suited		*Total*	*22.4*	*57*	*19.9*	*69*	*28.3*	*91*	*23.5*	*217*
	Severity	High	17.8	23	17.6	28	25.8	39	20.5	90
		Low	27.0	34	21.8	41	30.4	52	26.2	127
	Time Since Closure	Long	27.3	27	19.1	32	30.6	48	25.2	107
		Short	19.2	30	20.7	37	26.1	43	22.0	110
Very suited		*Total*	*6.3*	*16*	*7.2*	*25*	*15.5*	*50*	*9.9*	*91*
	Severity	High	8.5	11	7.6	12	14.6	22	10.3	45
		Low	4.0	5	6.9	13	16.4	28	9.5	46
	Time Since Closure	Long	7.1	7	9.5	16	17.8	28	12.0	51
		Short	5.8	9	5.0	9	13.3	22	8.0	40
Completely suited		*Total*	*3.5*	*9*	*4.3*	*15*	*8.1*	*26*	*5.4*	*50*
	Severity	High	5.4	7	3.1	5	6.0	9	4.8	21
		Low	1.6	2	5.3	10	9.9	17	6.0	29
	Time Since Closure	Long	6.1	6	1.8	3	6.4	10	4.5	19
		Short	1.9	3	6.7	12	9.7	16	6.2	31

*Percentages are expressed as percentages of column total for each category or subcategory

4.5.8 Summary

- One third of the sample reported that they were satisfied with the compensation claims process.
- Less than half the sample reported that they were satisfied with their rehabilitation.
- Half the sample reported that there was at least some commitment from those involved in rehabilitation to return them to work during their rehabilitation.
- Over half the sample reported that they had no knowledge at all about the compensation system when they first filed their claim (see Step 6 of the questionnaire in Appendix 5).
- Two thirds of the sample reported receiving information and advice from the legal profession. Those in Common Law and Commutations groups were far more likely to report having received information and advice from the legal profession than those on Weekly Benefits.
- Pathway was associated with satisfaction with the claims and rehabilitation experience. The Common Law and Commutation groups reported more dissatisfaction with the claims and rehabilitation experience than the Weekly Benefit claimants.
- Neither injury severity nor time since claim closure had any marked impact on claims experience.
- The role of recall bias is clearly an issue in interpreting these findings. Specifically, due to the retrospective nature of these perceptions it is difficult to disentangle the impact of the subsequent events and experiences after the claim had closed from claimant perceptions of the process at the time of being involved in it.

5 Results – Multivariate Analysis

5.1 Introduction

The aim of the multivariate analyses was to assess the relative statistical contribution of factors to outcomes based on the hypotheses.

The multivariate models are presented divided into the four outcome domains: Health; Return to Work; Social and Financial. Within each of these domains three models were produced for each outcome:

1) Process and experience factors associated with outcomes (Tables titled Number a)

2) Process and experience factors associated with outcomes, including the effect of other domain outcomes (Tables titled Number b)

3) Process and experience factors associated with outcomes after adjustment for socio-demographic factors (Tables titled Number c)

For a full description of the statistical methods and variables entered into analysis refer to Section 2.6 in the methods section.

Points to assist with the interpretation of the tables:

- *A reference category* in a logistic regression is the point of comparison for categorical variables and is conventionally reported as 1. For example if comparing the health risk between men and women, one could assign females as the reference category and compare the male odds against females. For the purpose of reporting, females would be assigned 1 and the odds ratio (OR) would be produced for the males. If the odds ratio was 2 then the males would have twice the odds of females.
- Significance level was set at 0.1 for manual elimination and at 0.05 for the SAS backwards statistical elimination model.
- Refer to Table 2-9 in methods section for the acronyms used in the multivariate tables.
- As discussed earlier, it should be recalled that the measurement of injury severity differed for the Weekly Benefits group from that used for the Common Law and Commutations groups (See Section 2.3). Although not able to be directly matched for severity, overlap was sought in the severity distributions of the three pathway sample, by purposeful sampling at the severe end of the Weekly Benefits pathway. The obtained distributions for the severity measure in the sample confirm the success of the sampling strategy, suggesting that credible comparisons can be made between pathway outcomes overall.
- The results of the multivariate analysis only suggest associations, they do not imply causal relationships.
- The term “risk factor” is a technical term and does not imply causality.

5.2 Health outcomes

Table 5.1a – 5.1c presents the results of the multivariate logistic regression analysis of factors associated with the health outcomes measured in the study.

Table 5-1(a) Process and experience factors associated with Health outcomes

	SF1 (N = 786)		PCS (N = 497)		MCS (N = 497)		K10 (N = 786)		SWL (N = 786)		Pain Frequency (N = 707)		Length of Pain (N = 707)	
Risk factor	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
Pathway														
Weekly Benefits	1	REF	1	REF	1	REF	1	REF	1	REF	1	REF	1	REF
Commutations	2.03	1.44 -2.86	2.00	1.19-3.36	1.18	0.75-1.86	2.01	1.42-2.84	1.65	1.16-2.35	1.43	0.94-2.19	1.56	1.07-2.28
Common Law	2.40	1.66-3.48	2.50	1.46-4.28	1.92	1.21-3.06	2.88	1.98-4.18	2.70	1.84 -3.97	1.89	1.18-2.94	1.71	1.14-2.55
Time since closure														
Short	1		1		1		1		1	REF	1		1	REF
long	#		#		#		#		0.66	0.49-0.89	#		1.64	1.20-2.24
Injury severity														
Low	1		1	REF	1		1		1	REF	1	REF	1	REF
hi	#		1.79	1.18-2.70	#		#		1.56	1.16-2.10	1.50	1.06-2.12	1.37	1.01-1.87
Injury type														
Other	1		1	REF	1		1		1	REF	1	REF	1	
Sprain/strain	#		3.68	2.41-5.60	#		#		1.39	1.04-1.88	1.65	1.17-2.34	#	
Claim duration														
Short	1		1		1		1		1		1		1	
Med	#		#		#		#		#		#		#	
Long	#		#		#		#		#		#		#	
Satisfaction with claims experience														
Satisfied/neutral	1	REF	1		1		1	REF	1	REF	1		1	REF
Dissatisfied	1.56	1.66 – 2.10	#		#		1.55	1.15-2.08	1.50	1.10-2.05	#		1.41	1.02-1.95
Advice received														
All advice (except advice)	1		1	REF	1		1		1		1	REF	1	
Legal advice	#		1.88	1.17-3.01	#		#		#		1.47	1.00-2.17	#	
Knowledge of the system														
At least some knowledge	1		1		1		1		1		1		1	
No knowledge	#		#		#		#		#		#		#	
Satisfaction with rehabilitation experience														
Satisfied/neutral	1		1	REF	1	REF	1		1	REF	1	REF	1	REF
Dissatisfied	#		1.56	1.02-2.36	1.70	1.18-2.45	#		1.39	1.02-1.90	1.92	1.35-2.74	1.75	1.23-2.41
Commitment to RTW														
At least some commitment	1		1		1		1		1		1		1	
No commitment	#		#		#		#		#		#		#	

removed by SAS backwards elimination ($p<0.05$)

Table 5-1(b) Process and experience factors associated with health outcomes, including the effect of return to work, financial and social outcomes[10]

	SF1 (N = 981)		PCS (N = 505)		MCS (N = 574)		K10 (N = 981)		SWL (N = 908)		Pain Frequency (N = 718)		Length of Pain(N = 820)	
Risk factor	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
Pathway														
Weekly Benefits	1	REF	1		1		1	REF	1	REF	1		1	
Commutations	1.35	0.97-1.88	#		#		1.21	0.86-1.70	1.11	0.78-1.57	#		#	
Common Law	1.67	1.17- 2.40	#		#		1.72	1.19-2.48	1.80	1.23-2.62	#		#	
Time since closure														
Short									1	REF			1	REF
long									0.72	0.55-0.96			1.46	1.10-1.95
Injury severity														
Low			1	REF					1	REF	1		1	
hi			1.62	1.08-2.45					1.36	1.02-1.80	#		#	
Injury type														
Other			1	REF					1		1	REF		
Sprain/strain			3.59	2.35-5.46					#		1.48	1.05-2.07		
Claim duration														
Short														
Med														
Long														
Satisfaction with claims experience														
Satisfied/neutral	1	REF					1	REF	1	REF			1	REF
Dissatisfied	1.55	1.17-2.04					1.40	1.06-1.86	1.61	1.20-2.17			1.46	1.08-1.99
Advice received														
All advice (except legal advice)			1	REF							1	REF		
Legal advice			2.20	1.39-3.46							1.52	1.04-2.23		
Knowledge of the system														
At least some knowledge														
No knowledge														
Satisfaction with rehabilitation experience														
Satisfied/neutral			1		1	REF			1	REF	1	REF	1	REF
Dissatisfied			#		1.58	(1.11-2.24			1.41	1.05-1.90	1.87	1.32-2.66	1.47	1.09-1.99
Commitment to RTW														
At least some commitment														
No commitment														
Durability of RTW														
Most or all of the time	1	REF	1	REF	1	REF	1	REF	1	REF	1	REF	1	REF
None/some of the time	3.16	2.37-4.21	2.71	1.79-4.11	2.36	1.63-3.42	2.96	2.21-3.97	1.95	1.45-2.64	1.79	1.27-2.54	1.61	1.20-2.17
Number of dissaving actions														
None	1		1		1	REF	1	REF	1		1		1	
1 or more	#		#		1.58	1.08-2.31	1.53	1.14-2.05	#		#		#	
Total social participation														
2 or more activity	1	REF	1	REF	1	REF	1	REF	1	REF	1	REF	1	REF
O or 1 activity	1.48	1.08-2.05	1.66	1.01-2.71	2.13	1.44-3.14	2.69	1.92-3.75	2.04	1.45-2.88	2.02	1.30-3.16	1.84	1.32-2.56

Entered into this model and removed by backwards elimination ($p<0.05$)

[10] Blank cells represent variables removed from model A so not entered into this model

Table 5-1(c) Process and experience factors associated with health outcomes after adjustment for socio-economic factors[11]

	SF1 (N = 966)		PCS (N = 504)		MCS (N = 586)		K10 (N = 977)		SWL (N = 907)		Pain Frequency (N = 725)		Length of Pain (N = 822)	
Risk factor	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
Pathway														
Weekly Benefits	1	REF	1	REF	1	REF	1	REF	1	REF	1	REF	1	REF
Commutations	1.61	1.16-2.24	1.78	1.04-3.05	0.93	0.60-1.42	1.56	1.13-2.16	1.24	0.88-1.73	1.21	0.80-1.85	1.44	1.02-2.04
Common Law	2.10	1.47-3.00	2.20	1.26-3.87	1.64	1.06-2.56	2.36	1.66-3.35	2.18	1.51-3.15	1.73	1.09-2.73	1.63	1.13-2.36
Time since closure														
Short									1	REF			1	REF
Long									0.72	0.55-0.96			1.55	1.17-2.07
Injury severity														
Low			1	REF					1	REF	1	REF	1	REF
Hi			1.60	1.04-2.45					1.39	1.05-1.84	1.43	1.01-2.02	1.28	0.96-1.69
Injury type														
Other			1	REF					1	REF	1	REF		
Sprain/strain			3.99	2.58-6.17					1.28	0.96-1.69	1.70	1.20-2.41		
Claim duration														
Short														
Med														
Long														
Satisfaction with claims experience														
Satisfied/neutral	1	REF					1	REF	1	REF			1	REF
Dissatisfied	1.65	1.24-2.19					1.44	1.09-1.91	1.56	1.16-2.10			1.36	1.00-1.84
Advice received														
All advice (except legal														
Legal advice)			1	REF							1	REF		
Legal advice			1.76	1.08-2.87							1.52	1.03-2.24		
Knowledge of the system														
At least some knowledge														
No knowledge														
Satisfaction with rehabilitation experience														
Satisfied/neutral			1	REF	1	REF			1	REF	1	REF	1	REF
Dissatisfied			1.48	0.96-2.27	1.73	1.22-2.46			1.57	1.17-2.11	1.89	1.33-2.70	1.60	1.19-2.15
Commitment to RTW														
At least some commitment														
No commitment														
Age														
Continuous variable with increasing age	1.02	1.01-1.04	1.03	1.01-1.05	#		#		#		1.02	1.01-1.04	#	
Sex														
Male	1		1		1		1		1	REF	1		1	
Female	#		#		#		#		1.33	0.98-1.82	#		#	
Education Status														
Degree	1	REF	1		1		1		1		1	REF	1	
Trade qualification / Diploma	1.78	1.02-3.12	#		#		#		#		0.71	0.32-1.59	#	
No educational qualification / School qualification	1.38	0.80-2.39	#		#		#		#		0.47	0.21-1.03	#	
Income														
Medium / High Income (>$20,800)	1	REF	1	REF	1		1	REF	1	REF	1		1	REF
Low Income (<$20,800)	1.60	1.15-2.24	1.91	1.14-3.21	#		1.52	1.10-2.10	1.45	1.02-2.05	#		1.47	1.08-1.99
Employment Status														
Employed	1	REF	1	REF	1	REF	1	REF	1	REF	1	REF	1	
Not in paid employment	2.30	1.68-3.15	1.68	1.05-2.69	2.89	2.04-4.11	2.91	2.16-3.93	1.71	1.24-2.36	1.59	1.10-2.30	#	

Entered into this model and removed manually ($p < 0.10$)

[11] Blank cells represent variables removed from model A so not entered into this model

5.2.1 General health

The analysis indicated that the risk of poor general health, as measured by the SF1 component of the SF-36, was significantly associated with two process and experience factors, types of compensation pathways and dissatisfaction with the claims process (Table 5.1a). The most substantial increase in risk of poor health was associated with compensation pathway type, with both the Common Law and Commutations pathways at least doubling the risk compared to the Weekly Benefits pathway.

When other (non-health) outcomes were included in the model (namely social, financial and return to work outcomes), pathway and claims experience remained significantly associated with poor general health (Table 5.1b). From the other outcome domains, durability of return to work and social participation were also significantly associated with poor general health. While compensation pathway type remained associated with an increased risk of poor health, it was a less influential factor in the presence of other outcome factors. The risk of poor general health associated with the Common Law pathway was 1.7 times that of the Weekly Benefits pathway, however the odds associated with the Commutation pathway was within what could be expected to occur by chance (95% CI includes unity). The most influential factor in this model was found to be durability of return to work, with less durable return to work being associated with a three fold increase in risk of poor health.

When the model describing the experience and process factors associated with poor general health was adjusted for the influence of socio-demographic factors, the influence of pathway and satisfaction with claims experience remained largely unchanged (Table 5.1c). This indicates that these factors independently increased the risk of poor outcome, once socio-demographic factors were taken into consideration. Among the socio-demographic factors, education status, income and employment status were associated with increased risk in terms of this health outcome, with age having virtually no effect and gender having no influence. Low income, having a trade qualification only and not being employed at the time of the interview increased risk of poor health.

5.2.2 Physical Health

The analysis indicated that the risk of poor physical health, as measured by the Physical Component Score of the SF-36, was significantly associated with several process and experience factors, including compensation pathway types, high injury severity, sprain/strain injury type, legal advice received and dissatisfaction with rehabilitation experience (Table 5.1a). The most substantial increase in risk of poor physical health was associated with injury type, where having a sprain or strain injury increased the risk of poor physical health more than threefold. As was the case for general health, both the Common Law and Commutations pathways at least doubled the risk of poor physical health compared to the Weekly Benefits pathway.

When other (non-health) outcomes were included in the model, high injury severity, sprain/strain injury type and legal advice received remained significantly associated with poor physical health (Table 5.1b). From the other outcome domains, durability of return to work and social participation were also significantly associated with poor physical health. The most influential factor in this model remained injury type, with a sprain or strain injury increasing the risk of poor physical health more than threefold. Durability of return to work was also strongly associated with this outcome, with less durable return to work being associated with a more than two and a half times increased risk of poor physical health.

When the model describing the experience and process factors associated with poor physical health was adjusted for the influence of socio-demographic factors, the effect of pathway, high injury severity, sprain/strain injury type and legal advice received remained largely unchanged (Table 5.1c). This indicates that these factors independently increased the risk of poor outcome, once socio-demographic factors were taken into consideration. The point estimate associated with dissatisfaction with rehabilitation experience however was unstable in this model and was within what could be expected to occur by chance (95% CI includes unity). Among the socio-demographic factors, income and employment status were associated with increased risk in terms of this health outcome, with age having virtually no effect. Low income and not being employed at the time of the interview increased risk of poor physical health.

5.2.3 Mental Health

The analysis indicated that the risk of poor mental health, as measured by a the Mental Component Score of the SF-36, was significantly associated with two process and experience factors, compensation pathway types and dissatisfaction with rehabilitation experience (Table 5.1a).The Common Law pathway nearly doubled the risk of poor mental health, while dissatisfaction with rehabilitation experience was associated with just over one and a half times the risk of the reference category.

When other (non-health) outcomes were included in the model (namely social, financial and return to work outcomes), only dissatisfaction with rehabilitation experience remained significantly associated with poor physical health (Table 5.1b). All of the factors from the other outcome domains, durability of return to work, social participation and number of savings reducing actions, were also significantly associated with poor mental health. The most influential factors in this model were those from the other outcome domains, durability of return to work and extent of social participation. Less durable return to work and lower levels of social participation were associated with a doubling of risk for poor mental health.

When the model describing the experience and process factors associated with poor physical health was adjusted for the influence of socio-demographic factors, the effect of pathway and dissatisfaction with

rehabilitation experience remained largely unchanged (Table 5.1c). This indicates that these factors independently increased the risk of poor outcome, once socio-demographic factors were taken into consideration. Among the socio-demographic factors, income and employment status were associated with increased risk in terms of this health outcome, with low income and not being employed at the time of the interview increasing the risk of poor physical health.

5.2.4 Psychological Distress

The analysis indicated that the risk of an elevated level of psychological distress, as measured by the Kessler 10, was significantly associated with two process and experience factors, compensation pathway type and dissatisfaction with claims experience (Table 5.1a). The most substantial increase in risk was associated with pathway, where the Common Law pathway nearly tripled the risk and the Commutations pathways doubled the risk of elevated levels of psychological distress compared to the Weekly Benefits pathway.

When other (non-health) outcomes were included in the model (namely social, financial and return to work outcomes), compensation pathway type and dissatisfaction with claims experience remained significantly associated with elevated levels of psychological distress (Table 5.1b). All of the factors from the other outcome domains, durability of return to work, social participation and number of savings reducing actions, were also significantly associated with elevated levels of psychological distress. While types of compensation pathways remained associated with an increased risk of psychological distress, it was a less influential factor in the presence of other outcome factors. The risk associated with the Common Law pathway was 1.7 times that of the Weekly Benefits pathway, however the odds associated with the Commutation pathway was within what could be expected to occur by chance (95% CI includes unity). The most influential factors in this model were those from the other outcome domains, durability of return to work and extent of social participation. Less durable return to work was associated with nearly a threefold increase in risk and a lower level of social participation was associated with over two and a half times the risk of elevated levels of psychological distress.

When the model describing the experience and process factors associated with psychological distress was adjusted for the influence of socio-demographic factors, the effect of pathway and satisfaction with claims experience remained, albeit with moderately reduced point estimates (Table 5.1c). This indicates that while these factors independently increased the risk of poor outcome, their effect is to a moderate extent accounted for by the effect of socio-demographic factors. Among the socio-demographic factors, income and employment status were associated with increased risk in terms of elevated level of psychological distress. Low income and not being employed at the time of the interview increased risk of psychological distress.

5.2.5 Satisfaction with Life

The analysis indicated that the risk of dissatisfaction with life as measured by the Satisfaction With Life Scale, was significantly associated with several process and experience factors, including compensation pathway type, short time since claim closure, high injury severity, sprain and strain injury type, dissatisfaction with claims experience and dissatisfaction with rehabilitation experience (Table 5.1a). The most substantial increase in risk was associated with pathway, where the Common Law pathway was associated with more than 2.5 times the risk of dissatisfaction and the Commutations pathway increased the risk of dissatisfaction with life 1.65 times, compared to the Weekly Benefits pathway. All other factors increased risk of dissatisfaction by around 0.4 or 0.5 times. It should be noted that the odds ratio of less than 1 with confidence limits also less than one obtained for the time since claim closure factor indicates a protective effect for long time since closure, and an increased risk effect for short time since closure.

When other (non-health) outcomes were included in the model (namely social, financial and return to work outcomes), compensation pathway type, short time since claim closure, high injury severity, dissatisfaction with claims experience and dissatisfaction with rehabilitation experience remained significantly associated with dissatisfaction with life (Table 5.2b). From the other outcome domains, durability of return to work and social participation were also significantly associated with elevated levels of psychological distress. While types of compensation pathway remained associated with an increased risk of dissatisfaction with life, it was a less influential factor in the presence of other outcome factors. The risk associated with the Common Law pathway was 1.8 times that of the Weekly Benefits pathway, however the odds associated with the Commutation pathway was within what could be expected to occur by chance (95% CI includes unity). Equally influential factors in this model were those from the other outcome domains, durability of return to work and extent of social participation. Less durable return to work and lower levels of social participation were associated with a doubling of the risk of dissatisfaction with life.

When the model describing the experience and process factors associated with dissatisfaction with life was adjusted for the influence of socio-demographic factors, the effect of compensation pathway types, short time since claim closure, high injury severity, sprain and strain injury type, dissatisfaction with claims experience and dissatisfaction with rehabilitation experience remained, albeit with moderately reduced point estimate for the influence of the Common Law pathway and loss of precision around the odds associated with the Commutation pathway and injury type, both of which were within what could be expected to occur by chance (95% CIs include unity). (Table 5.1c). This indicates that while the process and experience factors initially identified independently increased the risk of poor outcome, their effect was, to a moderate extent, accounted for by the effect of socio-

demographic factors. Among the socio-demographic factors, low income and not being employed at the time of the interview were associated with increased risk of dissatisfaction with life.

The point estimate for gender was considered within what could be expected by chance (95% CIs include unity).

5.2.6 Pain Frequency

The analysis indicated that the risk of experiencing pain very often was significantly associated with several process and experience factors, including compensation pathway type, high injury severity, sprain and strain injury type and dissatisfaction with rehabilitation experience (Table 5.1a). Although making a significant contribution to the multivariate model, the point estimates for the risk associated with receiving legal advice and with the Commutation pathway were considered unstable because both were within what could be expected to occur by chance (95% CIs include unity). The most substantially increased risk was associated with the Common Law pathway and with dissatisfaction with rehabilitation, both factors nearly doubling the risk of experiencing pain very often.

When other (non-health) outcomes were included in the model (namely social, financial and return to work outcomes), sprain and strain injury type, receiving legal advice and dissatisfaction with rehabilitation experience remained significantly associated with the risk of experiencing pain very often (Table 5.1b). From the other outcome domains, durability of return to work and social participation were also significantly associated with experiencing pain very often. The most influential factors in this model were dissatisfaction with rehabilitation and those from the other outcome domains, less durable return to work and lower levels of social participation. Each of these factors was associated with an increase of between 1.8 and 2 times the risk for experiencing pain very often.

When the model describing the experience and process factors associated with experiencing pain very often was adjusted for the influence of socio-demographic factors, the effect of compensation pathway types, high injury severity, sprain and strain injury type and dissatisfaction with rehabilitation experience remained largely unchanged (Table 5.1c). This indicates that these factors independently increased the risk of poor outcome, once socio-demographic factors were taken into consideration. Among the socio-demographic factors, not being employed at the time of the interview was associated with increased risk of experiencing pain very often. The point estimate for educational status was considered within what could be expected by chance (95% CI includes unity).

5.2.7 Pain Duration

The analysis indicated that the risk of experiencing pain for more than a day was significantly associated with several process and experience factors, including compensation pathway type, long time since claim closure, high injury severity, dissatisfaction with claims experience and dissatisfaction with rehabilitation experience (Table 5.1a). Each of these factors was associated with between 40% and 70% increased risk of experiencing pain for longer than a day.

When other (non-health) outcomes were included in the model (namely social, financial and return to work outcomes), long time since claim closure, dissatisfaction with claims experience and dissatisfaction with rehabilitation experience remained significantly associated with risk of experiencing pain very often (Table 5.1b). From the other outcome domains, durability of return to work and social participation were also significantly associated with experiencing pain for longer than a day. Each of these factors were associated with an increase of around 1.5 to 1.8 times the risk for experiencing pain for more than a day.

When the model describing the experience and process factors associated with experiencing pain for more than a day was adjusted for the influence of socio-demographic factors, the effect of compensation pathway type, long time since claim closure, high injury severity, dissatisfaction with claims experience and dissatisfaction with rehabilitation experience remained largely unchanged (Table 5.1c). A very moderate change to the precision of the point estimates for injury severity and dissatisfaction with claims was observed, with the 95% CIs for both factors now including unity. The very moderate change in influence of factors indicates that they were independently associated with pain duration, once socio-demographic factors were taken into consideration. Among the socio-demographic factors, low income was associated with increased risk of experiencing pain for longer than a day.

5.2.8 Summary

The type of compensation pathway had a consistent effect across all health outcomes. Common Law claimants had, on average, greater than double the risk of Weekly Benefits claimants to have poor health outcomes. Commutation claimants had greater risk than Weekly Benefits claimants but not as great as the Common Law group. This effect remained unchanged after adjustment for socio-demographic factors.

Dissatisfaction with the claims experience and with the rehabilitation experience also increased the risk of poor health outcomes across a range of outcomes. Dissatisfaction with these processes tended to increase the risk of poor outcomes by around one and a half times. This effect remained unchanged after adjustment for socio-demographic factors.

When the other return to work, social and financial outcomes were included in the model, these factors also had an impact on predicting health outcomes. Not being in durable return to work was the most influential outcome factor in increasing the risk of poor health outcomes. Although generally less influential than durable return to work, social participation also consistently contributed to increased risk of poor health outcomes. While compensation pathway type and satisfaction with the claims and rehabilitation experiences remained associated with an increase risk of poor health, they were less influential in the presence of the other outcome factors.

5.3 Return to Work Outcomes

Table 5.2a – 5.2c presents the results of the multivariate logistic regression analysis of factors associated with the return to work outcomes measured in the study.

Table 5-2(a) Process and experience factors associated with Return to Work outcomes

	RTW Rate (N = 786)		Durability of RTW (N =779)		Satisfaction with RTW (N =475)		Length of time before RTW (N =475)		Job Satisfaction (N =405)	
Risk factor	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
Pathway										
Weekly Benefits	1	REF	1	REF	1		1	REF	1	REF
Commutations	3.61	2.41-5.39	4.52	3.09-6.62	#		2.77	1.77-4.34	1.24	0.75-2.04
Common Law	2.91	1.92-4.41	4.74	3.18-7.07	#		2.98	1.86-4.77	2.21	1.32-3.68
Time since closure										
Short	1	REF	1		1		1		1	
long	0.60	0.44-0.82	#		#		#		#	
Injury severity										
Low	1	REF	1	REF	1		1	REF	1	
hi	1.54	1.13-2.09	1.73	1.26-2.37	#		2.27	1.55-3.33	#	
Injury type										
Other	1		1	REF	1		1		1	
Sprain/strain	#		1.38	1.01-1.89	#		#		#	
Claim duration										
Short	1		1		1		1		1	
Med	#		#		#		#		#	
Long	#		#		#		#		#	
Satisfaction with claims experience										
Satisfied/neutral	1		1		1	REF	1		1	
Dissatisfied	#		#		1.65	1.07-2.56	#		#	
Advice received										
All advice (except legal advice)	1		1		1		1		1	
Legal advice	#		#		#		#		#	
Knowledge of the system										
At least some knowledge	1		1		1		1		1	
No knowledge	#		#		#		#		#	
Satisfaction with rehabilitation experience										
Satisfied/neutral	1		1		1	REF	1		1	REF
Dissatisfied	#		#		2.15	1.36-3.39	#		1.60	1.05-2.45
Commitment to RTW										
At least some commitment	1	REF	1	REF	1	REF	1		1	
No commitment	1.88	1.36-2.60	1.83	1.29-2.59	1.74	1.07-2.83	#		#	

removed by SAS backwards elimination ($p<0.05$)

Table 5-2(b) Process and experience factors associated with Return to Work outcomes, including the effect of health, social and financial outcomes[12]

	RTW Rate (N = 859)		Durability of RTW (N = 847)		Satisfaction with RTW (N = 462)		Length of time before RTW (N = 509)		Job Satisfaction (N = 403)	
Risk factor	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
Pathway										
Weekly Benefits	1	REF	1	REF			1	REF	1	REF
Commutations	3.13	2.13-4.60	3.74	2.55-5.47			2.55	1.66-3.93	0.92	0.56-1.51
Common Law	2.16	1.44-3.23	3.36	2.24-5.02			2.78	1.77-4.37	1.78	1.06-2.99
Time since closure										
Short	1	REF								
long	0.63	0.46-0.85								
Injury severity										
Low	1	REF	1	REF			1	REF		
Hi	1.48	1.10-2.00	1.76	1.28-2.41			2.26	1.57-3.27		
Injury type										
Other			1	REF						
Sprain/strain			1.42	1.03-1.95						
Claim duration										
Short										
Med										
Long										
Satisfaction with claims experience										
Satisfied/neutral					1					
Dissatisfied					#					
Advice received										
All advice (except legal advice)										
Legal advice										
Knowledge of the system										
At least some knowledge										
No knowledge										
Satisfaction with rehabilitation experience										
Satisfied/neutral					1	REF			1	
Dissatisfied					2.19	1.39-3.44			#	
Commitment to RTW										
At least some commitment	1	REF	1	REF	1	REF				
No commitment	1.43	1.04-2.00	1.42	1.01-1.99	1.69	1.041-2.73				
SF1										
Good/ very good/ excellent	1	REF	1	REF	1		1		1	
Poor/ fair	2.03	1.48-2.80	2.34	1.69-3.24	#		#		#	
K10										
Low / Moderate	1	REF	1	REF	1	REF	1		1	REF
High / Very High	1.65	1.21-2.27	2.10	1.52-2.91	1.97	1.32-2.95	#		2.89	1.89-4.14
Pain frequency										
Not very often/fairly often	1	REF	1	REF	1		1		1	
Very often	2.19	1.53-3.13	1.44	1.02-2.04	#		#		#	
Number of dissaving actions										
None	1		1		1		1		1	
1 or more	#		#		#		#		#	
Total social participation										
2 or more activity	1		1		1		1		1	
O or 1 activity	#		#		#		#		#	

Entered into this model and removed by backwards elimination ($p < 0.05$)

[12] Blank cells represent variables removed from model A so not entered into this model

Table 5-2(c) Process and experience factors associated with Return to Work outcomes after adjustment for socio-economic factors[13] [14]

	RTW Rate (N = 938)		Durability of RTW (N =919)		Satisfaction with RTW (N =540)		Length of time before RTW (N =602)		Job Satisfaction (N =480)	
Risk factor	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
Pathway										
Weekly Benefits	1	REF	1	REF			1	REF	1	REF
Commutations	3.93	2.62-5.88	4.42	3.00-6.49			2.72	1.83-4.03	1.09	0.69-1.73
Common Law	3.79	2.48-5.80	5.49	3.65-8.27			2.97	1.94-4.55		1.37-3.52
Time since closure										
Short	1	REF								
long	0.46	0.33-0.64								
Injury severity										
Low	1	REF	1	REF			1	REF		
Hi	1.53	1.12-2.10	1.73	1.26-2.38			2.36	1.68-3.32		
Injury type										
Other			1	REF						
Sprain/strain			1.50	1.08-2.04						
Claim duration										
Short										
Med										
Long										
Satisfaction with claims experience										
Satisfied/neutral					1	REF				
Dissatisfied					1.57	1.04-2.35				
Advice received										
All advice (except legal advice)										
Legal advice										
Knowledge of the system										
At least some knowledge										
No knowledge										
Satisfaction with rehabilitation experience										
Satisfied/neutral					1	REF			1	REF
Dissatisfied					2.32	1.52-3.55			1.57	1.06-2.32
Commitment to RTW										
At least some commitment	1	REF	1	REF	1	REF				
No commitment	1.42	1.02-1.97	1.58	1.12-2.24	1.55	0.99-2.43				
Age										
Continuous variable with increasing age	1.06	1.04-1.07	1.03	1.01-1.04	#		#		#	
Sex										
Male	1	REF	1	REF	1		1		1	
Female	1.90	1.36-2.65	1.68	1.17-2.42	#		#		#	
Education Status										
Degree	1		1	REF	1		1		1	
Trade qualification / Diploma	#		0.85	0.45-1.61	#		#		#	
No educational qualification / School qualification	#		1.44	0.78-2.65	#		#		#	
Income										
Medium / High Income (>$20,800)	1	REF	1	REF	1	REF	1		1	REF
Low Income (<$20,800)	3.90	2.78-5.45	6.96	4.56-10.62	2.28	1.40-3.70	#		1.92	1.04-3.57

Entered into this model and removed manually ($p < 0.10$)

[13] Employment status removed from this model due to overlap with the RTW outcome variables

[14] Blank cells represent variables removed from model A so not entered into this model

5.3.1 Return to Work Rate

The analysis indicated that the risk of not having returned to work following injury was significantly associated with several process and experience factors, including compensation pathway type, short time since claim closure, high injury severity and lack of commitment from those in rehabilitation to return the participant to work (Table 5.2a). By far the most influential factor was pathway, with the Common Law pathway being associated with more than three and a half times the risk of non-return and the Commutation pathway being associated with three times the risk of non-return to work. It should be noted that the odds ratio of less than 1 with confidence limits also less than one obtained for the time since claim closure factor indicates a protective effect for long time since closure, and an increased risk effect for short time since closure.

When other (non-return to work) outcomes were included in the model (namely health, social and financial outcomes), compensation pathway type, short time since claim closure, high injury severity and lack of commitment from those involved in rehabilitation to return the participant to work remained significantly associated with risk of non-return to work (Table 5.2b). From the other outcome domains, health outcomes were also significantly associated with non-return to work. Pathway remained the most influential factor, with a threefold increase in risk associated with the Common Law pathway and a twofold increase in risk associated with the Commutation pathway. Health outcomes were the next most influential factors associated with non-return to work, with poor general health and frequent pain each associated with a two fold increase in risk. Elevated psychological distress, injury severity, level of rehabilitation commitment to return the injured worker back to work were each associated with an increase in risk of around 50%, while more recent claim closure had a protective effect of approximately the same magnitude.

When the model describing the experience and process factors associated with non-return to work was adjusted for the influence of socio-demographic factors, the effect of compensation pathway type, short time since claim closure, high injury severity and lack of commitment by those in rehabilitation to return the participant to work remained largely unchanged, albeit with a moderate change in the magnitude of the point estimate for short time since claim closure and level of commitment (Table 5.2c). The very moderate change in influence of factors indicates that they were independently associated with non-return to work, once socio-demographic factors were taken into consideration. Among the socio-demographic factors, low income and female gender were associated with increased risk of non-return to work, while age had virtually no influence.

5.3.2 Durability of Return to Work

The analysis indicated that the risk of not having durable return to work following injury was significantly associated with several process and experience factors, including compensation pathway type, high injury severity, sprain and strain injury type and lack of commitment by those in rehabilitation to return the participant to work (Table 5.2a). By far the most influential factor was pathway, with the risk of having returned to work none or only some of the time was increased nearly fivefold for the Common Law pathway and four and a half times for the Commutation pathway. High injury severity and lack of commitment to return to work during rehabilitation each nearly doubled the risk of none-durable return to work.

When other (non-return to work) outcomes were included in the model (namely health, social and financial outcomes), the type of compensation pathway, high injury severity, sprain and strain injury type and perceived lack of commitment from those involved in rehabilitation to return the participant to work remained significantly associated with risk of return to work none or only part of the time (Table 5.2b). From the other outcome domains, health outcomes were also significantly associated with non-durable return to work. Pathway remained the most influential factor, with close to a fourfold increase in risk associated with the Common Law pathway and over a threefold increase in risk associated with the Commutation pathway. Health outcomes were the next most influential factors associated with return to work none or only some of the time since injury, with poor general health and elevated levels of psychological distress each associated with around a two fold increase in risk. Frequent pain, high injury severity, sprain and strain injury type and lack of commitment to return to work from those involved in rehabilitation were each associated with an increase in risk of around 50%.

When the model describing the experience and process factors associated with non-return to work was adjusted for the influence of socio-demographic factors, the effect of compensation pathway type, high injury severity, sprain and strain injury type and lack of commitment from those involved in rehabilitation to return the participant to work remained largely unchanged (Table 5.2c). This indicates that these factors were independently associated with non-return to work, once socio-demographic factors were taken into consideration. Among the socio-demographic factors, low income and female gender were associated with increased risk of non-return to work, while age had virtually no influence and point estimates for educational status were what one could expect by chance (confidence intervals include unity).

5.3.3 Satisfaction with Return to Work

The analysis indicated that the risk of dissatisfaction with return to work following injury was significantly associated with several process and experience factors, including dissatisfaction with claims experience, dissatisfaction with rehabilitation experience and lack of commitment from all those involved in rehabilitation to return the participant to work (Table 5.2a). The most influential factor was dissatisfaction with rehabilitation experience which was associated with a two fold increase in the risk of dissatisfaction with return to work.

When other (non-return to work) outcomes were included in the model (namely health, social and financial outcomes), dissatisfaction with rehabilitation experience and lack of commitment from all those involved in rehabilitation to return the participant to work remained significantly associated with the risk of dissatisfaction with return to work (Table 5.2b). From the other outcome domains, only elevated psychological distress was significantly associated with dissatisfaction with return to work. Dissatisfaction with rehabilitation experience remained the most influential factor, being associated with just over a twofold increase in risk. Elevated psychological distress was a similarly influential factor, being associated with around a twofold increase in risk of dissatisfaction with return to work return.

When the model describing the experience and process factors associated with dissatisfaction with return to work was adjusted for the influence of socio-demographic factors, the effect of dissatisfaction with claims experience, dissatisfaction with rehabilitation experience and lack of commitment from all those involved in rehabilitation to return the participant to work remained largely unchanged (Table 5.2c). This indicates that these factors were independently associated with non-return to work, once socio-demographic factors were taken into consideration. Among the socio-demographic factors, low income was associated with increased risk of dissatisfaction with return to work.

5.3.4 Length of Time Before Achieving Return to Work

The analysis indicated that the risk of taking longer than 6 months to return to work following injury was significantly associated with only two process and experience factors, compensation pathway type and high injury severity (Table 5.2a). Pathway was the most influential factor, with both the Common Law and Commutation pathways associated with nearly a threefold increase in the risk of taking longer than 6 months to return to work following injury. High injury severity, the other factor in this model, more than doubled the risk of taking longer to return to work.

When other (non-return to work) outcomes were included in the model (namely health, social and financial outcomes), the type of compensation pathway and high injury severity remained the only factors significantly associated with taking longer to return to work following injury and they were associated with similar levels of effect in this model (Table 5.2b). None of the factors from the other outcome domains were significantly associated with taking longer to return to work.

When the model describing the experience and process factors associated with taking longer to return to work was adjusted for the influence of socio-demographic factors, the effect of compensation pathway type and high injury severity remained essentially unchanged (Table 5.2c). This indicates that these factors were independently associated with non-return to work, once socio-demographic factors were taken into consideration. None of the socio-demographic factors were associated with increased risk of taking longer to return to work.

5.3.5 Job Satisfaction

The analysis indicated that, for those participants who were back at work at the time of the interview, the risk of job satisfaction being reduced from pre-injury levels was significantly associated with only two process and experience factors, compensation pathway type and dissatisfaction with rehabilitation experience (Table 5.2a). Pathway was the most influential factor, with the Common Law pathway associated with a little over twice the risk of reduced job satisfaction in the current job. The point estimate associated with the Commutation pathway was considered within what could be expected by chance (95% CI includes unity).Dissatisfaction with rehabilitation experience, the other factor in this model, was associated with a 60% increase in the risk of reduced job satisfaction in the current job.

When other (non-return to work) outcomes were included in the model (namely health, social and financial outcomes), the type of compensation pathway remained significantly associated with reduced job satisfaction with both Common Law and Commutation pathways being associated with similar levels of effect in this model (Table 5.2b). From the other outcome domains, only elevated psychological distress was significantly associated with reduced job satisfaction. Elevated psychological distress was the most influential factor in this model, being associated with nearly a threefold increase in risk of reduced job satisfaction.

When the model describing the experience and process factors associated with reduced job satisfaction was adjusted for the influence of socio-demographic factors, the effect of compensation pathway type and dissatisfaction with rehabilitation experience remained essentially unchanged (Table 5.2c). This indicates that these factors were independently associated with non-return to work, once socio-demographic factors were taken into consideration. Among the socio-demographic factors, only low income was associated with increased risk of reduced job satisfaction.

5.3.6 Summary

The type of compensation pathway had a consistent effect across all the return to work outcomes, except for satisfaction with return to work. Common Law and Commutation claimants had a much greater risk of having poor return to work outcomes compared with Weekly Benefits claimants. This effect was strongest for durability of return to work where Common Law and Commutation claimants had at least four times the risk of non-durable return to work compared with Weekly Benefits claimants. The impact of pathway remained unchanged, if not slightly increased, after adjustment for socio-demographic factors.

A lack of commitment on behalf of all those involved in rehabilitation to return the participant to work during rehabilitation and high severity injury also increased the risk of poor return to work across a range of outcomes. The effect of injury severity remained unchanged after adjustment for socio-demographic factors. While the effect of level of commitment to return to work remained associated with an increased risk of poor return to work outcomes, this factor was less influential in the presence of the socio-demographic factors.

When the other health, social, and financial outcomes were included in the model, the health outcomes also had an impact on predicting outcomes. High levels of psychological distress increased the risk of poor return to work outcomes. The effect of injury severity remained unchanged after the outcomes were included in the model. While compensation pathway type and a lack of commitment to return to work from all those involved in rehabilitation remained associated with an increase risk of poor return to work outcomes, they were less influential in the presence of the other outcome factors. Even though the effect size was reduced for the type of compensation pathway it was still the most influential predictor of return to work outcomes.

5.4 Social Outcomes

Table 5.3a – 5.3c presents the results of the multivariate logistic regression analysis of factors associated with the two social outcomes measured in the study.

Table 5-3(a) Process and experience factors associated with Social outcomes

	Total Contact (N = 786)		Total participation (N =786)	
Risk factor	**OR**	**95% CI**	**OR**	**95% CI**
Pathway				
Weekly Benefits	1	REF	1	
Commutations	1.74	1.09-2.77	#	
Common Law	2.15	1.34-3.47	#	
Injury severity				
Low	1		1	
Hi	#		#	
Satisfaction with claims experience				
Satisfied/neutral	1		1	
Dissatisfied	#		#	
Advice received				
All advice (except legal advice)	1		1	
Legal advice	#		#	
Knowledge of the system				
At least some knowledge	1		1	
No knowledge	#		#	
Satisfaction with rehabilitation experience				
Satisfied/neutral	1		1	
Dissatisfied	#		#	
Commitment to RTW				
At least some commitment	1		1	REF
No commitment	#		1.60	1.13-2.25

removed by SAS backwards elimination ($p<0.05$)

Table 5-3(b) Process and experience factors associated with social outcomes, including the effect of health, return to work and financial outcomes[15]

	Total Contact (N = 898)		Total participation (N =847)	
Risk factor	OR	95% CI	OR	95% CI
Pathway				
Weekly Benefits	1			
Commutations	#			
Common Law	#			
Injury severity				
Low				
Hi				
Satisfaction with claims experience				
Satisfied/neutral				
Dissatisfied				
Advice received				
All advice (except legal advice)				
Legal advice				
Knowledge of the system				
At least some knowledge				
No knowledge				
Satisfaction with rehabilitation experience				
Satisfied/neutral				
Dissatisfied				
Commitment to RTW				
At least some commitment			1	
No commitment			#	
SF1				
Good/ very good/ excellent	1		1	
Poor/ fair	#		#	
K10				
Low / Moderate	1	REF	1	REF
High / Very High	1.98	1.39-2.83	2.50	1.76-3.57
Pain frequency				
Not very often/fairly often	1		1	REF
Very often	#		1.69	1.13-2.52
Durability of RTW				
Most or all of the time	1	REF	1	REF
None/some of the time	1.51	1.04-2.19	1.47	1.03-2.11
Number of dissaving actions				
None	1	REF	1	
1 or more	1.49	1.02-2.17	#	

Entered into this model and removed by backwards elimination ($p < 0.05$)

[15] Blank cells represent variables removed from model A so not entered into this model

Table 5-3(c) Process and experience factors associated with social outcomes after adjustment for socio-economic factors[16]

	Total Contact (N = 997)		Total participation (N =934)	
Risk factor	**OR**	**95% CI**	**OR**	**95% CI**
Pathway				
Weekly Benefits	1	REF		
Commutations	1.47	1.00-2.17		
Common Law	1.57	1.04-2.36		
Injury severity				
Low				
Hi				
Satisfaction with claims experience				
Satisfied/neutral				
Dissatisfied				
Advice received				
All advice (except legal advice)				
Legal advice				
Knowledge of the system				
At least some knowledge				
No knowledge				
Satisfaction with rehabilitation experience				
Satisfied/neutral				
Dissatisfied				
Commitment to RTW				
At least some commitment			1	REF
No commitment			1.41	1.02-1.94
Age				
Continuous variable with increasing age	#		#	
Sex				
Male	1	REF	1	
Female	0.62	0.43-0.89	#	
Education Status				
Degree	1		1	REF
Trade qualification / Diploma	#		1.35	0.65-2.79
No educational qualification / School qualification	#		2.00	0.99-4.06
Income				
Medium / High Income (>$20,800)	1	REF	1	REF
Low Income (<$20,800)	1.47	1.06-2.03	1.45	1.01-2.08
Employment Status				
Employed	1		1	REF
Not in paid employment	#		1.60	1.23-2.28

Entered into this model and removed manually ($p < 0.10$)

[16] Blank cells represent variables removed from model A so not entered into this model

5.4.1 Total Social Contact

The analysis indicated that the risk of less social contact with family and friends was significantly associated with the type of compensation pathway (Table 5.3a). The most substantial increase in risk of less social contact health was associated with the Common Law compensation pathway, at least doubling the risk compared to the Weekly Benefits pathway. The risk of less social contact associated with the Commutations pathway was 1.7 times that of the Weekly Benefits pathway.

When other (non-social) outcomes were included in the model (namely health, return to work and financial outcomes), the type of compensation pathway was no longer significantly associated with less social contact (Table 5.3b). From the other outcome domains, psychological distress, durability of return to work and the number of financial actions were also significantly associated with less social contact. The most influential factor in this model was found to be psychological distress, with higher levels of psychological distress being associated with a two fold increase in risk of less social contact. The risk of less social contact associated with both less durable return to work and higher number of savings reducing actions was one and a half times that of more durable return to work and less savings reducing actions respectively.

When the model describing the experience and process factors associated with less social contact was adjusted for the influence of socio-demographic factors, the influence of compensation pathway type was reduced but remained significant (Table 5.3c). This indicates that pathway independently increased the risk of poor outcome but was less influential, once socio-demographic factors were taken into consideration. The risk of less social contact associated with the Common Law pathway was reduced to 1.5 times that of the Weekly Benefits pathway. The point estimate associated with Commutations pathway however was unstable in this model and was within what could be expected to occur by chance (95% CI includes unity). Among the socio-demographic factors, sex and income were associated with increased risk of less social contact. The point estimate associated with sex, however, was unstable in this model and was within what could be expected to occur by chance (95% CI includes unity). The risk of less social contact was one and a half times greater for low income persons compared with those who had medium or high income.

5.4.2 Total Participation

The analysis indicated that the risk of engaging less social activities was significantly associated with a lack of commitment to return to work from others in rehabilitation (Table 5.3a). The risk of low social participation was associated with no commitment to return to work being 1.6 times that of at least some commitment to return participants to work.

When other (non-social) outcomes were included in the model (namely health, return to work and financial outcomes), level of commitment to return to work from all those involved in rehabilitation was no longer significantly associated with less social activities (Table 5.3b). From the other outcome domains, psychological distress, durability of return to work and pain frequency were significantly associated with participation in less social activities. The most influential factor in this model was found to be psychological distress, with higher levels of psychological distress being associated with a two and a half times the risk of participation in fewer social activities. The risk of participating in fewer social activities associated with greater frequency of pain was 1.7 times that of lesser frequency of pain. The risk of participating in fewer social activities associated with less durable return to work was one and a half times that of more durable return to work.

When the model describing the experience and process factors associated with participating in fewer social activities was adjusted for the influence of socio-demographic factors, the influence of the level of commitment to return to work from all those involved in rehabilitation was reduced but remained significant (Table 5.3c). This indicates that the level of return to work commitment independently increased the risk of poor outcome, once socio-demographic factors were taken into consideration. The risk of participating in fewer social activities with no commitment of return to work from all those involved in rehabilitation was reduced to 1.4 times that of at least some commitment to return to work. Among the socio-demographic factors education status, income, employment status were associated with participating in fewer social activities .

The risk of less social participation was about two times greater for those participants with no educational qualifications compared with participants who had degree qualifications. The point estimate associated with participants who had trade and diploma qualifications however was unstable in this model and was within what could be expected to occur by chance (95% CI includes unity). The risk of less social participation was about 1.5 times greater for low income participants and unemployed participants compared with those with medium or high income and employed persons respectively.

5.4.3 Summary

The other health, financial and return to work outcome adjustment factors had a greater impact on the social outcomes than the process and experience predictor factors. Psychological distress, and durability of return to work were associated with both social contact and participation. The number of actions taken that reduced savings was associated with social contact, and pain frequency was associated with social participation.

The specific predictors and adjustment factors that were associated with the two social outcomes had different impacts depending on the social outcome. The type of compensation pathway was associated with the amount of social contact, and level of commitment of return to work from all those involved in rehabilitation was associated with degree of participation in social activities after adjustment for socio-demographic factors. Income was associated with both social contact and participation. Educational qualifications and employment status were associated with social participation.

5.5 Financial Outcomes

Table 5.4a – 5.4c presents the results of the multivariate logistic regression analysis of factors associated with the risk of taking some action that reduced financial savings.

The analysis indicated that the risk of some financial savings reducing action was significantly associated with the type of compensation pathway (Table 5.4a). The most substantial increase in risk of some savings reducing action was associated with the Common Law compensation pathway, more than doubling the risk compared to the Weekly Benefits pathway. The risk of some financial actions associated with the Commutations pathway was 1.8 times that of the Weekly Benefits pathway.

When other (non-financial) outcomes were included in the model (namely health, return to work and social outcomes), pathway remained significantly associated with savings reducing actions (Table 5.4b). The risk of taking some financial action that reduced savings was associated with the Common Law and Commutations pathway, was double the risk compared to the Weekly Benefits pathway. From the other outcome domains, general health and psychological distress were also significantly associated with some savings reducing action. The risk of carrying out some savings reducing action associated with higher levels of psychological distress was 1.6 times that of lower levels of psychological distress. Poor or fair general health was associated with somewhat less risk of some savings reducing action compared with people who had good general health.

When the model describing the factors associated with financial action was adjusted for the influence of socio-demographic factors, the influence of pathway remained significant (Table 5.4c). The risk of taking some financial savings reducing action was associated with the Common Law and Commutations pathway, was at double the risk compared to the Weekly Benefits pathway. None of the socio-demographic factors were associated with increased risk of savings reducing actions. The point estimate associated with age was unstable in this model and was within what could be expected to occur by chance (95% CI includes unity).

5.5.1 Summary

The type of compensation pathway was the most influential predictor of whether a claimant had taken some form of financial savings reducing action, with Common Law and Commutations being associated with greater risk of taking some form of savings reducing action compared with the Weekly Benefit pathway. Psychological distress and health had an independent effect on savings reducing actions.

Table 5-4(a) Process and experience factors associated with Financial outcomes

	Number of Financial Actions (none vs some) (N = 796)	
Risk factor	**OR**	**95% CI**
Pathway		
Weekly Benefits	1	REF
Commutations	1.81	1.27-2.58
Common Law	2.27	1.53-3.36
Injury severity		
Low	1	
hi	#	
Claim duration		
Short	1	
Med	#	
Long	#	
Satisfaction with claims experience		
Satisfied/*neutral*	1	
Dissatisfied	#	
Advice received		
All advice (except legal advice)	1	
Legal advice	#	
Satisfaction with rehabilitation experience		
Satisfied/neutral	1	
Dissatisfied	#	

removed by SAS backwards elimination ($p<0.05$)

Table 5-4(b) Process and experience factors associated with financial outcomes, including the effect of health, return to work and social outcomes[17]

	Number of Financial Actions (none vs some) (N = 898)	
Risk factor	**OR**	**95% CI**
Pathway		
Weekly Benefits	1	REF
Commutations	2.05	1.45-2.89
Common Law	2.10	1.45-3.06
Injury severity		
Low		
hi		
Claim duration		
Short		
Med		
Long		
Satisfaction with claims experience		
Satisfied/neutral		
Dissatisfied		
Advice received		
All advice (except legal advice)		
Legal advice		
Satisfaction with rehabilitation experience		
Satisfied/neutral		
Dissatisfied		
SF1		
Good/ very good/ excellent	1	REF
Poor/ fair	0.69	0.50-0.95
K10		
Low / Moderate	1	REF
High / Very High	1.60	1.18-2.18
Pain frequency		
Not very often/fairly often	1	
Very often	#	
Durability of RTW		
Most or all of the time	1	
None/some of the time	#	
Total social participation		
2 or more activity	1	
O or 1 activity	#	

Entered into this model and removed by backwards elimination

[17] Blank cells represent variables removed from model A so not entered into this model

Table 5-4(c) Process and experience factors associated with financial outcomes after adjustment for socio-economic factors[18]

	Number of Financial Actions (none vs some) (N = 998)	
Risk factor	**OR**	**95%**
Pathway		
Weekly Benefits	1	REF
Commutations	1.92	1.40-2.63
Common Law	2.15	1.52-3.04
Injury severity		
Low		
hi		
Claim duration		
Short		
Med		
Long		
Satisfaction with claims experience		
Satisfied/neutral		
Dissatisfied		
Advice received		
All advice (except legal advice)		
Legal advice		
Satisfaction with rehabilitation experience		
Satisfied/neutral		
Dissatisfied		
Age		
Continuous variable with increasing age	0.98	0.97-0.99
Sex		
Male	1	
Female	#	
Education Status		
Degree	1	
Trade qualification / Diploma	#	
No educational qualification / School qualification	#	
Income		
Medium / High Income (>$20,800)	1	
Low Income (<$20,800)	#	
Employment Status		
Employed	1	
Not in paid employment	#	

Entered into this model and removed by backwards elimination

[18] Blank cells represent variables removed from model A so not entered into this model

6 Discussion

This is the first purpose-specific study to comprehensively and directly examine the health, return to work, social and financial outcomes of a large representative sample of workers' compensation claimants in Australia. The results revealed poor health and poor return to work outcomes in all compensation pathways. Moreover, the outcomes appeared to be poorer for the Common Law and Commutations participants.

6.1 Strengths and limitations of the study

The major strengths of this study lie in its approach, design and rigorous methodology. To fully examine and understand the impact of the workers' compensation system on the health, well-being and functioning of injured workers, it is necessary to adopt an holistic approach taking into account multiple factors associated with the hypothesised outcomes. This study was designed to measure multiple dimensions and capture a range of claimant outcomes. Most of the previous research has generally focused on one, or at most two dimensions (eg return to work). The holistic approach of this study allowed us to not only examine the impact of the processes and experience factors but also to examine the impact of the outcomes on each other. The benefit and justification for adopting this multi-dimensional approach is borne out in the results that suggest that the health, return to work, social and financial outcomes are interrelated for workers who are injured and participate in the workers' compensation system in NSW. Another feature of this research was the great care that was taken to select the most valid and reliable questions and scales that were suited to this population.

Careful sampling and recruitment were also hallmarks of the study. The study achieved a good response rate, in fact higher than was expected, and achieved a sample that was representative of the Common Law, Commutations and Weekly Benefits claimants groups in the claimant population from which the sample was drawn. There was no systematic bias in the achieved sample due to non-response or non-contact of the eligible sample, and the three compensation pathways sampled were well matched for age, sex, country of birth, indigenous status, language spoken at home, marital status, highest qualification obtained and occupation classification. While the Weekly Benefits sample reported a higher income and employment rate than both the Common Law and Commutations samples, the potential influence of these factors on the outcomes of all multivariate analyses were adjusted for a range of factors including income and employment status. The sample obtained was large enough to be able to detect meaningful differences between groups and was representative of the specified strata of the NSW claimant population (that is the sample was representative of sample characteristics for each of the twelve stratification groups).

Although every effort was made to enhance the study design it was not without its limitations. Three major limitations influence the interpretation of the associations between the predictors and the outcomes reported.

Firstly this study is cross-sectional so the direction of causation is not clear. In line with this, it is difficult to determine the impact of factors that existed at the time of injury, during the progress of the claim or after claim closure (prior to the survey) on the outcomes measured.

The second major limitation is recall bias due to the retrospective recall of the claims and rehabilitation experience. The role of recall bias is clearly an issue in interpreting these findings. Specifically, it is difficult to disentangle the impact of the subsequent events and experiences after the claim had closed from claimant perceptions of the process at the time of being involved in it.

The third major limitation in the study relates to the measures available for one of the major stratification factors in the study design, namely injury severity. The injury severity measure for the Weekly Benefits group (ie. number of days of benefits paid), was different to the measure of severity for Commutations and Common Law groups (ie. the measure using the Section 66 case estimate). Different measures had to be used because there are no appropriate common measures available in the claims data across all claimant groups. The difference in measures means that it is difficult to unambiguously interpret differences in the influence of injury severity by pathway. Any observed trends with respect to pathway-specific differences in the impact of injury severity may reflect, in part, lack of precision in the of severity measurement.

Apart from the difficulties for comparability presented by the injury severity measures not being the same, there was also most likely a systematic bias in the utility of the measures used. It is likely that the measure of severity for the Weekly Benefits group was a more robust one because it was based on an actual injury cost measure rather than an estimated one. In general, the effect of injury severity as measured in this study was not particularly prominent. However, where impact was observed, it seemed to be more marked in the Weekly Benefits group than in the other two groups. This observation ought to be regarded as indicative rather than conclusive, and certainly warrants further investigation with better measures.

One of the important outcomes of the 2001 WorkCover Reforms was the move to use of the Whole of Person Impairment (WPI) guidelines to evaluate all permanent injury impairments, rather than the Section 66 case estimate measure. While this new measure will not address the problem of providing a consistent measure of severity across all claimants, it will provide a more robust measure for a subset of claimants, those with permanent injury impairments. Importantly, there will be claimants with permanent injury impairment who will receive Common Law settlements and there will also be those who will remain in receipt of Weekly Benefits together with a lump

sum payment for the permanent impairment injury. This situation provides an important potential opportunity to investigate the relative efficacy of different benefit structures for injuries of varying severity, using a common robust measure of severity.

Perhaps the most serious consequence of the lack of comparable claim severity or injury severity measures was that matching of claimants in each of the three pathways for severity was not possible. Lack of matching on severity raises concerns about the comparability of the three pathway groups. This means that it is possible that differences observed for outcomes of participants in the three pathways reflect the influence of differing levels of injury severity, that is that pathway is a proxy for injury severity. Two factors mitigate against this interpretation. First, a vast body of epidemiological research exists which suggests that injury severity is not the major determinant of response to injury, response to treatment or response to compensation (see PwC 2002), suggesting that it is unlikely that injury severity would account for all variance observed here. Second, the sampling strategy for the study specifically addressed this issue. Purposeful sampling was successfully used to recruit Weekly Benefits participants from the more severe end of the spectrum, so that even the so-called low severity Weekly Benefits participants were of a high minimum severity threshold. Thus, although not able to be directly matched for severity, overlap was likely in the severity distributions of the three pathway samples. This interpretation was supported by examination of the distributions of the participants in each of the severity groups for each pathway type on comparable measures for the reduced sample where these were available. For both the Section 66 case estimate measure and the total days paid measure, the distributions showed separation between high and low groupings within pathway types and overlap in the distributions between pathway types. Together, these factors suggest that credible comparisons can be made between pathways.

6.2 Health Outcomes

The general health status and psychological health of this population of claimants was poorer than the national average. It could be argued that having recruited from the more severe end of the claimant population, it is not particularly surprising that the health status of the sample was below that of the national and state average. Nevertheless the magnitude of the difference warrants comment. The sample were, for instance, 4 and 5 times as likely as the population average to be in the poorest categories of general health and psychological distress respectively. The health status of the claimant sample was more similar to levels reported by sufferers of other chronic health conditions, although the levels reported by the WorkCover sample were found to be at the poorer end of the spectrum. Given that time since claim closure had little effect on these findings, it suggests that improvements in health status do not accrue over time.

Overall, the Weekly Benefits group reported better health outcomes than the Common Law group with the Commutations claimants falling between the two. On the more global and psychological outcomes (i.e. general health, psychological distress and satisfaction with life) the Weekly Benefit group reported better outcomes than the Common Law group with the Commutations claimants falling in between the two. In terms of the more physical health related outcomes (i.e. measures of pain and physical health) those in the Weekly Benefits group reported better health than both the Commutations and Common Law groups who reported similar rates of poor physical health. While these results suggest that the Weekly Benefits participants tended to have better health outcomes, the results should not be taken to suggest an absence of health compromise in this group. Rather the results suggested a gradient, with less compromise to health status evident in this group.

The severity of claimants' injuries had a specific impact on only a few measures of few health outcomes. Participants with low severity injuries reported better general health and satisfaction with life than those with high severity injuries. This pattern of results was broadly consistent across both the multivariate and descriptive analyses. These findings confirm those reported in a large body of literature and their consistency across analyses in the present study suggests that the effects observed are robust.

The aim of the multivariate analysis was to assess the association between claims and rehabilitation experience and the outcomes. The results of this study suggest that the type of compensation pathway and satisfaction with the claims process and rehabilitation experience were strongly associated with health status even after adjustment for socio-demographic factors. Not surprisingly, the impact of injury type was the most influential associate of physical health overall, although not of pain. When the other outcomes (namely return to work, social and financial outcomes) were taken into account the strength of the association between pathway and health outcomes was reduced. Lower rates of being in durable return to work were strongly associated with poorer health, while lower rates of participating in social activities was also an associated factor of poor health, although less influential. This suggests that compensation pathway type, health outcomes, durability of return to work and participation in social activities are inter-related in this population.

Overall, this sample of claimants had poorer health outcomes than the population as a whole and were at the poorer end of the spectrum among other chronic disease and injury groups to which they were compared (specifically diabetes, work related and non-work related back injury and general non-specific work related injury). This outcome was found for all compensation pathway groups, however, the results suggest that the odds of poor health after claim closure were increased among Common Law and Commutations participants. This was the case irrespective of how long may have elapsed (up to 5 years) since the claim was closed. Successful return to work was found to be associated with a reduced likelihood of poor health in claimants, again irrespective of time since claim closure.

6.3 Return to Work Outcomes

Sixty percent of the sample reported that they had either not returned to work at all or had only returned for a short period of time since their claim had closed. In other words, only 4 in 10 injured workers had returned to work for a durable period of time.

Over half (57%) of those who had returned to work were at the time of this survey working for a different employer and performing different kinds of duties than at the time of injury.

Of those who had returned to work, the majority (68%) were either satisfied with or neutral about their return to work experience. Almost two thirds reported that their job satisfaction was the same or more compared with their work satisfaction prior to injury. These results suggest that if an injured worker is successfully returned to employment, then both the return to work process and job satisfaction will most likely be rated as satisfactory.

The type of compensation pathway was found to be strongly associated with return to work outcomes. The Weekly Benefits group reported better return to work outcome than either the Common Law or the Commutations groups on most indicators including: return to work rate; length of time before return to work; durability of return to work; changes in the type of employer; job description and reported quality of working life from pre to post –injury. Interestingly, compensation pathway type did not affect the reported satisfaction with the return to work experience as a whole.

Overall, then, the results of the present study suggest that the type of compensation pathway was a strongly associated factor with outcome on a range of return to work measures. High injury severity was also consistently associated with poor outcome. Socio-demographic factors had little impact on these associations. Surprisingly, neither injury type nor time since claim closure were consistently or particularly strongly associated with return to work outcomes. Finally, when return to work experience was unsatisfactory, the multivariate analysis implicated a role for an unsatisfactory and uncommitted (from those involved in rehabilitation) rehabilitation process.

The analysis also confirmed the importance of the relationship between return to work and health outcomes. Poorer health outcomes were consistently associated with poorer return to work outcomes. This finding confirms the well-documented relationship between these domains (Feyer and Broom, 2001; Bartley, Ferrie et al, 1999). Establishing directly that a relationship exists between health and return to work outcomes in this population follows trends from other social research contexts is a very important step forward from having to rely on extrapolations. However, from this study, because of its cross-sectional nature, the direction of the relationship is not clear.

6.4 Social Outcomes

This sample of claimants reported that they participated in a range of social activities, have high rates of social contact with family and friends, and have strong support in a time of crisis.

The type of compensation pathway, injury severity and time since claim closure had little effect on contact with family and friends, support received in a crisis and participation in social activities. Lack of commitment of return to work from all those involved in rehabilitation and pathway type slightly increased the likelihood of poorer social outcomes but other factors had a more influential impact on the social outcomes such as: psychological distress, savings reducing actions, durability of return to work, education status and income. These latter findings confirm well-demonstrated social health phenomena (Marmot and Wilkinson, 1999; Turrell and Mathers, 2000).

The measures of social outcome used in this survey showed little association with any of the factors measured in this study. This result may be due to a number of reasons. First, there may be no real effect of the claims and rehabilitation process on social outcomes. Alternatively, the non-effect of the claims and rehabilitation process on social outcomes may be an artefact of insensitive measurement tools. At this stage a comparison of the social and financial outcomes of this claimant sample with the national average is not possible because the results of the General Social Survey are not as yet available so that it is difficult to judge whether these social outcomes are adversely affected by the claims process and rehabilitation experience.

6.5 Financial Outcomes

Sixty six percent of the sample were in some form of debt. As with social outcomes, at this stage a comparison of the financial outcomes of this claimant sample with the national average is not possible because the results of the General Social Survey are, as yet, unavailable.

The type of compensation pathway was associated with whether a participant had taken some form of financial action which diminished their savings, with Common Law and Commutations groups being associated with greater odds of taking such actions compared with the Weekly Benefits groups. From the present study, the reasons for this finding are not clear. In line with previous research, it may reflect poor financial management; or the finding may reflect inadequacy of the lump sum payment. Alternatively, it may reflect neither of these influences. Weekly Benefit participants were less likely to have drawn upon accumulated savings (a specific saving reducing action) than the Common Law and Commutations groups. This could reflect that Weekly Benefit participants were more likely to have returned to work.

Neither injury severity nor time since claim closure had an effect on financial actions which compromised savings, level of debt or financial and social consequences of workers' compensation.

The majority of participants who received a Common Law or commuted settlement reported that they used this settlement to assist with the costs of daily living (this measure excluded mortgage payments, loan payments or contributions towards investments, holidays or a personal business). Over half the sample reported being at least dissatisfied with the lump sum settlement they received for their injury. This finding is entirely in keeping with previous work which has reported claimant dissatisfaction with lump sum payment (PwC 2002).

To conclude our findings on financial outcomes, this sample of claimants does not appear to be "debt ridden". Claimants who received a lump sum either through a Common Law settlement or a Commutation were more at risk of taking savings reducing actions than Weekly Benefit participants.

6.6 Claims and Rehabilitation Experience

In this study, participants were asked to give retrospective ratings of their experience of the workers' compensation claims and rehabilitation process. Specifically participants were asked to rate their satisfaction with the claims process, knowledge of the system, satisfaction with the advice received, satisfaction with rehabilitation and perception of the level of commitment from all those involved in rehabilitation to return them to work.

In general, a majority of this sample perceived that the process was not to their satisfaction. Only one third of the sample were satisfied with the compensation claims process. Less than half the sample reported satisfaction with their rehabilitation. Only half the sample felt that there was at least some commitment from all those involved in rehabilitation to return them to work.

The type of compensation pathway was associated with satisfaction with the claims and rehabilitation experience. The Common Law and Commutations groups reported more dissatisfaction with the claims and rehabilitation experience than the Weekly Benefits group. Neither injury severity nor time since claim closure had any marked impact on claims experience, suggesting that the relationship with the compensation pathway is indeed a direct one.

A common source of information and advice for participants was provided by the legal profession. Two thirds of the sample received advice from this source. In keeping with the nature of the compensation pathway, those in the Common Law and Commutations groups were far more likely to report having received information and advice from legal sources than those in the Weekly Benefits group. On the other hand, the findings also showed that advice, from legal or other sources, had little impact on any of the measured outcomes.

Overall, these results suggest that when this sample of claimants looked back and reflected on their claims and rehabilitation experience they did not perceive that the process was meeting their requirements. Due to the retrospective nature of these perceptions it is difficult to disentangle the impact of the subsequent events and experiences after the claim had closed from claimant perceptions of the process at the time of being involved in it.

6.7 Placing the present results within the international and NSW workers' compensation context.

In 2001, a series of Reforms (Workers' Compensation Legislation Amendment Act 2001 Nos 61, 87 and 94) were introduced. Essentially, these Reforms were a response to increasing concern about the effectiveness of Common Law and Commutations settlements in achieving their objectives, either for the scheme or for the injured worker. The results of the present study suggest that these concerns may have been justified, and that neither of these lump sum settlement types may have been associated with the best outcomes for the injured worker. It must be concluded that, while doing better than the lump sum groups, the Weekly Benefits group cannot be considered as doing particularly well.

The general pattern of findings in the present study is in keeping with a recent unpublished study by the Workers' Compensation Research Institute (WCRI). They reported similarly poor return to work and health outcomes, using similar measures and methods, in a sample of US workers compensated for work-related injury 3 to 3.5 years after injury (WCRI 2002). Those findings suggest that many of the problems associated with recovery following compensated work-related injury are not unique to the environment in NSW.

As a result of the 2001 Reforms, which had the effect of restricting access to Commutations, the volume of outstanding Commutations is expected to be in rapid decline (PwC 2002). Also as a result of the 2001 Reforms, the number of new Common Law intimations is expected to be significantly lower than in previous years (PwC 2002). However, actuarial projections suggest that the overall level of lump sum pay outs will not change substantially. Despite the expectation that the number of new common law claims will be reduced and that some aspects of the Reforms will act to reduce the average claim size, it is also considered likely that these factors will be offset by a skewed distribution towards more severely injured claimants (with larger average settlements) among new common law settlements.

The post-reform situation, then, is likely to be one with a remaining lump sum sub-group, with some of those injured workers who would previously have received lump sums now more likely to receive Weekly Benefits. From the present study, it is not clear whether the poor outcomes of those in the Common Law and Commutations groups were due to the pathway per se, or the selection of certain injured workers to that pathway, or perhaps some

combination of the two. It is therefore entirely possible that the causes of enduring ill health for these injured workers may go with them to the other compensation pathways that may be taken.

6.8 Outstanding issues

The purpose of engaging in the sort of research described in this report is three fold:

1. The need to identify relationships between outcomes and scheme policy/design;

2. The need to identify measurable trade-offs between outcomes and scheme design to guide policy; and

3. The need to identify the impact of reform and innovation on outcomes.

While the present study contributes to the evidence base to answer these purposes, it nevertheless leaves a number of outstanding issues and questions.

The questions used to measure the social and financial outcomes were taken from the ABS General Social Survey (2002) and have not been used to our knowledge in any other population health study. Once the results of this National survey are released we will be able to judge how valid and reliable the questions are to assess the outcomes of interest. At this stage we are unable to compare the social and financial outcomes of this claimant sample with the national average because we are waiting on the results of the General Social Survey.

Claim severity measures were used in this study as a proxy for injury severity. This reflects the data that are available in the routine information collected for claim purposes, and it must be recognised that they are not ideal measures for assessment of injury severity. The nature and role of injury severity needs to be examined with more consistent measures of injury severity developed and, ideally, collected early in the claims process. One of the crucial outstanding issues remaining to be resolved is whether the die is cast in very early interactions with the system, so that those who will have poor outcome in the longer term are those who have poorer status early in the post-injury process.

The present research lends evidence-based support to the need for reforms targeting the Common Law and Commutations pathways, such as those undertaken in 2001. The questions that now remain are whether the poor outcomes found among the Common Law and Commutations groups in this study are the result of participating in the process or the result of who is selected into that pathway or some combination of the two, and what will be the extent and distribution of any benefit of the specific reforms enacted.

The present research also clearly raises concerns about the outcome of the group who were not the most prominent focus of the Reforms, the Weekly Benefits group. The outcomes for those on Weekly Benefits, in essence, confirmed that core aspects of the NSW Scheme are not viewed as satisfactory. While these are perceptions, and open to all the biases of such perceptions, these perceptions were reliably associated with poorer outcomes. That finding makes them noteworthy. On the other hand, neither the direction of causation nor the influence of factors that existed either at the time of injury or after claim closure are clear from the present results. The outstanding question that remains is whether there are consistent key aspects of scheme design which can be identified during the claim and rehabilitation process which are prognostic indicators of poor outcome and which could become the focus of future scheme re-design and innovation.

6.9 Conclusions

The key findings of this study were as follows:

1. The self-rated health status of this sample of former claimants was poorer than the national average and appeared to vary by compensation pathway type. Common Law and Commutations groups were found to have poorer health outcomes than the Weekly Benefits group. However, reported health status did not vary overly by injury severity or time since claim closure.

2. Overall, the return to work rate was low. Return to work outcomes varied independently by compensation pathway and by injury severity. Weekly Benefits claimants, in general, appeared to have better return to work outcomes than either the Common Law or Commutations groups. Return to work outcome was not overly affected by time since claim closure.

3. There was clear indication of inter-relationships between health, return to work, social and financial outcomes. Poorer health was associated with lower rates of return to work and lower rates of social participation. Lower levels of social contact were associated with poorer financial outcomes.

4. A majority of the sample perceived that the claims and rehabilitation process (compensation claims process, rehabilitation, level of commitment to return them to work) was not to their satisfaction.

5. Socio-demographic factors had little effect on the associations observed.

This is a ground breaking study in the field of workers' compensation research in Australia and provides an important benchmark. It has developed a robust picture of outcomes for claimants in the NSW following claim closure, circa 2002/3. This provides a powerful position for analysis and understanding of the impact of future scheme design change and innovation.

The availability of such a benchmark is unique in the history of the NSW Scheme (and exists nowhere else nationally that we are aware of): there have been no previous comprehensive analyses of claimant outcomes following compensation for work-related injury. This study lays the foundation for building the future evidence base in NSW.

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