Patterns and predictors of failed and sustained return-to-work in transport injury insurance claimants

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Abstract

Purpose: To determine the proportion of employed people who try and fail to return-to-work (RTW) following a transport crash. To determine factors associated with failed RTW.

Methods: The study was conducted in the state of Victoria, Australia. People insured through the state-based compulsory third party transport accident compensation scheme were included. Inclusion criteria included date of crash between 2003 and 2012 (inclusive), age 15 to 70 years at the time of crash, sustained a non-catastrophic injury and received at least one day of income replacement. A matrix was created from an administrative payments dataset that mapped their RTW pattern for each day up to three years post-crash. A gap of seven days of no payment followed by resumption of a payment was considered a RTW failure and was flagged. These event flags were then entered into a regression analysis to determine the odds of having a failed RTW attempt.

Results: Seventeen percent of individuals had a RTW fail, with males having 20 percent lower odds of experiencing RTW failure. Those who were younger, had minor injuries (sprains, strains, contusions, abrasions, non-limb fractures), or were from more advantaged socio-economic group, were less likely to experience a RTW failure. Most likely to experience a RTW failure were individuals with whiplash, dislocations or particularly those admitted to hospital (odds ratio 2.55).

Conclusions: Understanding the causes and predictors of failed RTW can help insurers, employers and health systems identify at-risk individuals. This can enable earlier and more targeted support and more effective employment outcomes.

Keywords

injuries; return to work; rehabilitation

Introduction

Every year in Australia more than forty-five thousand people are seriously injured and require hospitalisation following transport crashes, with the rate increasing 0.9% annually [1]. Additionally, there are a vast number of people who sustain more 'minor' injuries that do not require hospitalisation, yet their ability to undertake normal daily activities, including work, can still be impaired [2]. The social cost of road crashes in Australia has been estimated at $17.85 billion, with 32% of these costs attributed to workplace and household losses, due to work absence, lost productivity and necessity of training replacements [3].

Engagement in work following injury is widely recognised as being an important step for rehabilitation and recovery. Prolonged absence from the workplace can be harmful to both mental and physical health [4]. Longer periods of time away from work have been associated with reduced likelihood of successful return to work (RTW) [5, 6]. By re-engaging injured individuals in the workforce, their pre-injury skills are preserved, confidence and sense of self-efficacy increases, and the impact on social support networks and the community is decreased [5].

Return to work (RTW) following injury is also an important marker of functional recovery [6]. There are numerous published studies to describe the factors affecting RTW across many types and mechanisms of injury [2, 7-10]. Studies often use administrative data to objectively obtain estimates of work disability [9-11], or time spent away from work, whereas others use self-reported survey data to determine whether an injured individual has returned to work at particular follow-up times [2, 7, 8]. The RTW process has been described as having four stages: work absence; re-entry; maintenance; and advancement [12]. Ideally, an injured individual follows this linear journey in a timely manner. However, issues adjusting to the demands of employment may mean that work is difficult to maintain, causing one or more relapses to absenteeism [12].

Previous studies have examined such relapses or failed RTW attempts for those injured in work-related incidents [11, 13, 14]. These studies have emphasised that first RTW should not be used as the major marker for employment success and recovery as it is not always a permanent and stable outcome. One study identified that fewer than 40% of injured workers who RTW remain in stable employment following their injury [14]. A Canadian study of injured workers by Butler et al (1995) demonstrated that almost 60% of those who RTW had at least one subsequent injury-related work absence following their return [13]. Non-RTW predictors following transport-related injury were identified as being the driver or passenger, high disability or pain, low function, and low expectations of RTW [15]. The RTW rate in this study was high (78.4%), however this study did not investigate whether RTW was sustained.

Baldwin et al (1996) showed that workers at greatest risk of unsuccessful RTW were older, female, less educated, more likely to have injured their back, and less likely to receive employer accommodations for their functional limitations [14]. A more recent study in Victoria, Australia, found individuals injured in work-related incidents whose first attempt at RTW was 13 weeks after injury were 50% more likely to relapse or have a failed RTW attempt [11]. Risk factors for unsuccessful RTW were age between 35 and 55 years, female gender, working as a labourer or in the manufacturing industry, and having a musculoskeletal disorder or an injury involving the neck or multiple body regions [11].

In contrast to work-related injury, the prevalence and predictors of failed RTW following injuries sustained in transport crashes has received little attention. In Australia, as in most industrialised nations, rehabilitation and compensation systems for people injured in transport crashes differ considerably from those for people injured at work. For example, there is no requirement for employers to provide modified or alternative duties for employees injured in a transport crash in contrast to an injury sustained at work. These differences may contribute to differences in patterns of employment and RTW after injury.

Understanding the predictors of failed RTW can aid the development of interventions seeking to ensure sustained return to the workforce. Therefore, the objectives of this study are to i) determine the proportion of people injured in transport crashes who had failed RTW or sustained RTW and their characteristics and ii) identify factors associated with failed RTW attempts.

Methods

Setting

The Transport Accident Commission (TAC) in the state of Victoria, Australia, is a Government-owned organisation that promotes road safety, funds treatment and rehabilitation services and provides financial support for those that have been injured in transport-related crashes (including drivers, passengers, pedestrians, motorcyclists, and in some cases, cyclists) [16]. The scheme administered by TAC is a no-fault injury compensation scheme, meaning that benefits will be paid to an injured person regardless of who caused the crash, and can be in the form of medical or rehabilitation costs, or income support when unable to work.

Data sources

Data were extracted from the Compensation Research Database (CRD), held at the Institute for Safety, Compensation and Recovery Research. The CRD includes detailed information on all claims, payments, services, hospital admissions, and medical certificates processed for all compensated transport (Transport Accident Commission) and workplace injuries and illnesses (Worksafe Victoria) in Victoria since 1985 [17].

The dataset used for this study was a modified version of the TAC Payments Dataset, which is inclusive of claim and claimant information, and each entry is a record of a payment made for a service. This dataset includes information on the crash, claimant characteristics (e.g. age, sex, postcode), injury details, service type, and payment details. Further, this dataset

includes the severity group variable, which was derived using information in the hospital admissions dataset (see Predictors) and merged with the TAC Payments Dataset using claim identification number.

Inclusion/Exclusion criteria

Records were included if the transport crash occurred between the 2003 and 2012 calendar years (inclusive) and were retained if there was at least one day of relevant income replacement benefit paid (as a loss of earning or loss of earning capacity payment). Note that income replacement is only paid if the claimant has had at least five days off work.

Fatalities and catastrophic injuries, which includes quadriplegia and severe acquired brain injury and are deduced using the TAC-defined catastrophic injury flag, were excluded. Further, only accepted claims from claimants aged between 15 and 70 years at the time of their crash were retained.

Predictors

Ten-year age brackets from 15 to 54 years, and a group from 55 to 70 years, were created based on the age at the time of crash (see Table 1). The most common injury types were retained, with the remainder collapsed into the 'other injuries' group. The socioeconomic status of the claimant was deduced using the postcode of residence of the claimant using the Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) [18]. The IRSAD deciles (where '1' indicates most disadvantage up to '10' that indicates most advantage) were classified into most disadvantaged (lowest 30%, deciles 1-3), middle (40-70%, deciles 4-7) and most advantaged (highest 30%, deciles 8-10). The severity of the injury was formulated in collaboration with the TAC using existing variables in the dataset, such as services accessed and length of hospital stay, into newly defined categories (e.g. not aligned with formal injury coding).

Table 1: Predictor variables used for analysis

Sex	Age group	Injury type	Socio-economic status	Severity group
Female Male	15-24 years 25-34 years 35-44 years 45-54 years 55-70 years	Contusion abrasions Sprains, strains (to body regions other than the neck) Whiplash Dislocations Fracture – other Fracture – limb Internal injury (e.g. organ damage) Mild acquired brain injury Other injuries	Most disadvantaged (lowest 30%) Middle (40-70%) Most advantaged (highest 30%)	Admitted to hospital with non-catastrophic injury Emergency or ambulance services but not admitted (or discharged on the same day) Received no hospital, emergency or ambulance services

Note: 'Other injuries' includes paraplegia, spinal, amputation, burns, loss of sight, degloving, concussion, nerve damage and other injuries.

Outcomes

Income replacement can be in the form of loss of earnings (LOE) or loss of earnings capacity (LOEC) payments. LOE are paid for up to the first 18 months' period post-injury, following which injured people may become eligible for LOEC benefits for a further 18-month period. Relevant benefit codes that were included related to full and partial income replacement.

A matrix was developed to map the income replacement pattern for each claimant. Each row of the matrix represented an individual (N = 33,263), and each of the 1095 columns represented a single day during the three-year follow-up period (or the maximum LOE/LOEC duration). The first column, or day one, of each row represented the earliest date of payments in the claimant's record. Each successive column represented an additional day following the initial payment date. For example, column 116 represents 116 days following the initial income replacement payment. If income replacement was paid on any day the

matrix element [*i,j*] was changed to a ‘F’ or ‘P’, depending on whether full or partial income replacement was paid on that day. A ‘N’ was placed in the element if the claimant did not receive income replacement on day *j*. Figure 2 provides an example of how this character matrix was created.

Figure 1: Example case for matrix set-up

Claimant 123XYZ received full income replacement commencing 03/03/10, and this payment ended on 10/03/10. The claimant then received partial income replacement from 11/03/10 to 13/03/10. From 14/03/10, claimant 123XYZ received no income replacement due to returning to work, however was back on full income replacement on 23/03/10 due to a failed return to work attempt.

	03/03/2010							10/03/2010	11/03/2010		13/03/2010									23/03/2010			...
Column number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	...
123XYZ	F	F	F	F	F	F	F	F	P	P	P	N	N	N	N	N	N	N	N	N	F	F	F	...

Creation of this matrix allowed the analysis of income replacement on any given day at a case level. For example, for each claimant it can be determined whether they were receiving income replacement on any day after their initial income replacement.

The desirable outcome for TAC claimants accessing income replacement is to return to work following a period of recovery without relapsing back to any form of income replacement. Lack of income replacement was used as a proxy for RTW, with a series of at least seven days of no income replacement indicative of having RTW. This was detected with the patterns ‘FNNNNNNN’ or ‘PNNNNNNN’ in sequential columns of the matrix. A relapse or failed RTW was defined as a gap in payments of at least seven days, followed by a resumption of income replacement payments. This approach has been used previously [11]. Thus, the patterns required for detection for failed RTW were ‘NNNNNNNF’ or ‘NNNNNNNP’, with the position of the last character in the matrix (column number) recorded in a result matrix. This meant that claimants could have RTW for seven days or longer prior

to relapse. Note that the result matrix could have recorded multiple RTW fails if the above pattern was detected more than once (e.g. a claimant attempted RTW three times after failing twice). The primary outcome of interest in this study was a simple dichotomous variable (fail flag) determined by whether the failed RTW pattern was detected at least once (fail flag = 1) or not at all (fail flag = 0).

Analysis

To visualise patterns of income replacement, a subset of the income replacement matrix was taken (20 cases) and limited to 730 days following the first income replacement payment (or two years). This was then converted to an image where a matrix element is replaced with the colour red if the claimant was receiving income replacement, and grey if not.

The income replacement matrix was combined with the original dataset (33,263 cases) and matched by claim identifier, meaning that the individuals' daily pattern of RTW was combined with their claim information. Cases were removed from the combined dataset if the date of the first payment was missing (n = 10), if they did not attempt a RTW in the three years (n = 1029), or they were missing critical data that was necessary for regression analysis (n=4 were missing gender and n=289 were missing decile information respectively). The final number of cases was 31,953 (note that cases could have more than one type of missing information).

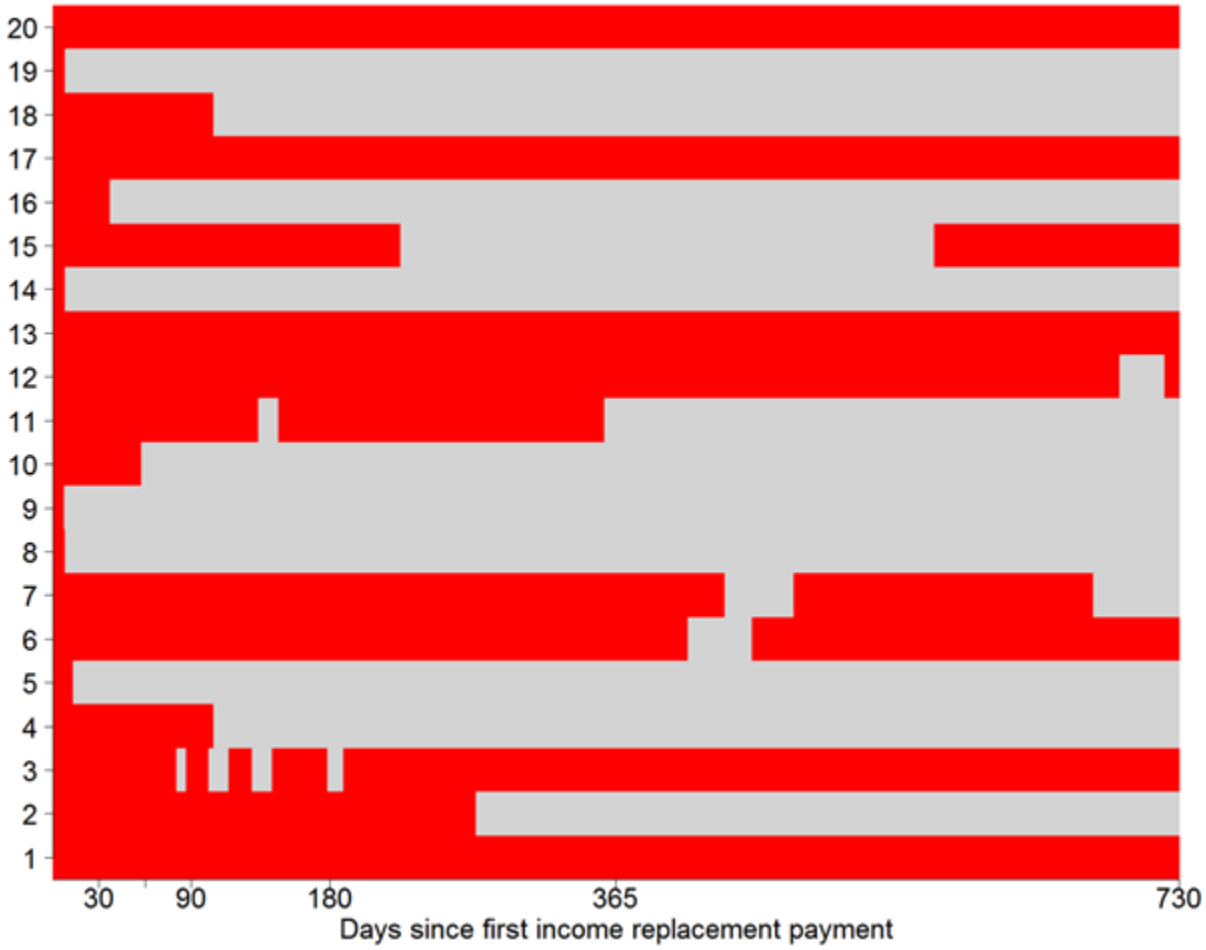
Descriptive statistics showing the characteristics of both the group with sustained RTW (fail flag = 0) and those with a failed RTW attempt were tabulated, stratified by sex, age group, injury type, socioeconomic group, and severity group. To determine the odds of having a failed RTW attempt by sex, age group, injury type, socioeconomic group, and severity group, multivariable logistic regression was performed using the dichotomous failed RTW flag as the event. The exponent was calculated to determine the odds ratio, and results were tabulated with 95% confidence intervals and p-values. McFadden's pseudo R-squared was also calculated.

Inclusion criteria were applied using SPSS Version 23. All other analyses were conducted using RStudio Version 1.0.136.

Results

Figure 2 provides a visual representation of failed RTW attempts by showing varying patterns of income replacement for a sample of 20 claimants. Each row on the figure is a single claimant and time is the x-axis (to two years post injury), with red representing days of income replacement and grey RTW. This visualisation shows that claimants '6', '7', '11' and '12' had a failed RTW attempt in the two years since their initial income replacement payment (indicated by resumption of red following a period of grey). Claimant '3' had multiple failed RTW attempts. Other claimants were permanently on income benefits (all red, e.g., individuals 1, 13, 17 and 20) or RTW without subsequent periods of time on income replacement (red followed by grey only e.g., individuals 5, 8, 9, 14, 16, 18 and 19).

Figure 2: Visual representation of example income replacement patterns



Note: Red indicates income replacement, grey indicates no income replacement (or return to work).

Of the 31,953 individuals who met the inclusion criteria, 17% had a least one RTW failure (n = 5,401) and 4.6% had multiple RTW failures (or 27% of those with at least one RTW failure). Median number of days until first RTW for those with a RTW failure was 118 days (IQR 44-288), as opposed to 51 days for those with sustained RTW (IQR 19-140). The median time spent at work prior to recommencement of income replacement was 44 days (IQR 15-173).

Table 2 shows that there were few obvious differences between characteristics of those who experienced a RTW failure and those who successfully sustained a RTW. However, those

who were admitted to hospital following their crash were more commonly represented among those with a RTW failure.

Table 2: Summary statistics for participants who had a failed RTW attempt versus those who have sustained RTW (N = 31,953)

	Failed RTW		Sustained RTW	
	n	Column %	n	Column %
Sex				
Female	2112	39.1	9683	36.5
Male	3289	60.9	16869	63.5
Age Group				
15-24 years	1068	19.8	5955	22.4
25-34 years	1274	23.6	6730	25.3
35-44 years	1295	24.0	5948	22.4
45-54 years	1194	22.1	4982	18.8
55-70 years	570	10.6	2937	11.1
Injury Type				
Contusion abrasions	198	3.7	2128	8.0
Sprains, strains	176	3.3	1402	5.3
Whiplash	1031	19.1	5517	20.8
Dislocations	430	8.0	1085	4.1
Fracture - other	380	7.0	2877	10.8
Fracture - limb	1698	31.4	7389	27.8
Internal Injury	578	10.7	2159	8.1
Mild Acquired Brain Injury	551	10.2	2124	8.0
Other injuries	359	6.6	1871	7.0
Socioeconomic Group				
Most disadvantaged (lowest 30%)	1379	25.5	6574	24.8
Middle (40-70%)	2325	43.0	11028	41.5
Most advantaged (highest 30%)	1697	31.4	8950	33.7
Severity Group				
Admitted to hospital with non-catastrophic injury	4373	81.0	16538	62.3
Emergency or ambulance services but not admitted (or discharged on the same day)	427	7.9	4746	17.9
Received no hospital, emergency or ambulance services	601	11.1	5268	19.8

Note: 'Other injuries' includes paraplegia, spinal, amputation, burns, loss of sight, degloving, concussion, nerve damage and other injuries. An odds ratio greater than 1 indicates higher odds of having a failed RTW compared with the reference.

Males had 20 percent lower odds of having failed at RTW than females (table 3). Compared to the reference group (aged 35-44 years), younger individuals (15-34 years) were less likely to have failed at RTW. Compared to limb fractures, those with contusions and abrasions were the least likely of all injury types to have a failed RTW. Further, those with sprains, strains or other fractures were also less likely to fail at RTW, whereas individuals with whiplash or dislocations had significantly greater odds of having a failed RTW. Individuals from the most advantaged areas had around 10 percent lower odds of failure than the middle socioeconomic group. Compared to those who received no hospital or ambulance treatment, individuals who were admitted to hospital were much more likely (odds ratio 2.55) to have failed at RTW.

Table 3: Odds of having at least one failed RTW by predictor, including the 95% confidence interval and the level of significance

	Odds ratio	**Lower bound (2.5%)**	**Upper bound (97.5%)**	**p-value**
Sex				
Female	Ref			
Male	0.80	0.75	0.85	<0.01
Age Group				
15-24 years	0.79	0.72	0.86	<0.01
25-34 years	0.85	0.78	0.93	<0.01
35-44 years	Ref			
45-54 years	1.08	0.99	1.18	0.09
55-70 years	0.91	0.81	1.01	0.08
Injury Type				
Contusions, abrasions	0.41	0.35	0.47	<0.01
Sprains, strains	0.72	0.61	0.85	<0.01
Whiplash	1.18	1.07	1.30	<0.01
Dislocations	1.55	1.37	1.76	<0.01
Fracture – limb	Ref			
Fracture – other	0.58	0.52	0.66	<0.01
Internal injury	1.04	0.93	1.16	0.49
Mild acquired brain injury	1.05	0.94	1.17	0.41
Other injuries	0.92	0.81	1.04	0.18
Socioeconomic Group				
Most disadvantaged (lowest 30%)	1.02	0.95	1.10	0.55
Middle (40-70%)	Ref			

Most advantaged (highest 30%)	0.89	0.83	0.95	<0.01
Severity Group				
Admitted to hospital with non-catastrophic injury	2.55	2.31	2.81	<0.01
Emergency or ambulance services but not admitted (or discharged on the same day)	0.82	0.72	0.94	<0.01
Received no hospital, emergency or ambulance services	Ref			

Note: 'Other injuries' includes paraplegia, spinal, amputation, burns, loss of sight, degloving, concussion, nerve damage and other injuries. An odds ratio greater than 1 indicates higher odds of having a failed RTW compared with the reference.

Discussion

Analysis of RTW patterns of individuals injured in transport crashes, who are insured through a state-wide compulsory injury compensation scheme, has shown that 17% do not recommence stable employment following their first RTW attempt. This proportion is lower than a Victorian study of workers' compensation claims that found 37% of individuals had at least one failed RTW following their first RTW attempt [11].

By understanding the causes and predictors of failed RTW outcomes, the development of effective work disability prevention strategies can occur, and individuals at risk of failing at RTW can be identified early to receive greater support. This study has identified that individuals who are younger, male and from the most advantaged socioeconomic group had lower odds of having a failed RTW attempt. On the other hand, those with whiplash or dislocations, or those who were admitted to hospital for treatment of their injuries had the greatest odds of failure. There are consistencies between this study and previous studies of failed RTW attempts in different cohorts [11, 13, 14].

Older workers have been shown to have increased likelihood of prolonged time off work following injury, and greater number of failed RTW attempts [11, 14, 19]. The results of this study are consistent with these findings. Proposed explanatory theories include that older

individuals may have existing diseases or comorbidities that younger individuals do not, which may impact on their recovery [19]. Additionally, there are biological effects associated with aging such as slower tissue repair and less muscle elasticity that may affect healing [19], and a RTW may be attempted prior to complete recovery, leading to failure. Further, misguided advice may be given to older individuals to rest rather than a graded return to normal activities, which could contribute to delayed recovery [20].

Females have been found to have greater odds at failing at RTW [11, 14], consistent with our findings. Previous research in Canada found that failure was more likely among less educated individuals [14], however this information was not captured and hence could not be investigated. Our findings did, however, associate higher socioeconomic group with lower odds of failure, however these are not explicitly linked. Additionally, this study did not factor in the bodily location of injury into the regression model, and it is therefore unknown whether this would have an impact on successful RTW outcomes.

Injury type categories are stated exactly as they appear in the TAC dataset. These are assigned by the injury claim manager and are not directly based on medical records. The whiplash injury category is coded as such where there is a sprain or strain to the neck, yet the severity of this injury can be highly variable. RTW success of whiplash-afflicted individuals can vary greatly depending on their psychological state, symptoms, severity, and occupation [21, 22], information that was not available for this study. The increased odds of RTW failure among whiplash-afflicted individuals could be that they have been provided with specious advice regarding rest [20], or that there is a greater propensity to avoid movement for fear of re-injury [23], contributing to delayed recovery.

Concussion was listed within the ‘other injuries’ categories due to low number of cases, however it can be argued that it could be combined with the mild acquired brain injury category given the high degree of overlap between their clinical presentation [24]. The decision was made to retain the injury categories used by the TAC rather than attempt to

produce modified injury categorisation. The ‘other injuries’ category varies largely in the type of injuries included, and interpretation of these results should be made with caution.

A large proportion of the cohort were admitted to hospital for treatment, which is not representative of all those injured in transport crashes [3]. It is important to note that those that met the selection criteria had to have at least one day of income replacement, which is only provided by the TAC after an individual has had at least five days off work. Less-severely injured individuals, such as the large number of transport crash-injured individuals with sprains and strains, may not receive income replacement as they RTW within five days of the crash or onset of injury, or they chose to use sick leave from their employer rather than apply for income replacement benefits.

Further, whilst not included in the regression model, descriptive statistics showed that median first RTW was 51 days for individuals in the sustained RTW group, whereas median first RTW was not until 118 days for those with a RTW fail. This result is similar to that determined previously among injured workers where a delayed first RTW was associated with greater odds of failure [11]. It is possible that for successful and sustainable RTW, it is important to re-engage in work in the early post-injury period (where possible) as it seems that they are more likely to relapse if this does not occur, but should be the subject of future analysis controlling for injury type and severity. This is not always possible, however, as hospital treatment and rehabilitation may delay RTW, which could help explain why those admitted to hospital had greater odds of RTW failure.

Individuals injured in transport crashes may not be capable of returning to their pre-crash occupation, as their resulting psychological and/or physical capabilities may prevent it. Inability to return to pre-injury occupation or role in one study was found to be 44% of individuals (but were able to return in a different role) [7]. For example, an individual who has sustained a spinal cord injury may not be capable of returning to a manual labour occupation. Successful RTW is not solely focused on the injured person or their injuries, but

rather the interaction of these with the work environment [13]. To ensure successful and sustained re-entry into the workforce it is important for the employer to make accommodations that offset the functional limitations of the injured worker, including education and skill development, and where necessary changing the role of the injured individual.

Unlike employers that are legally required to accommodate individuals who have been injured in the course of their work, employers of individuals who are injured in transport crashes and covered by the TAC have no legal obligation to provide workplace accommodations [25]. It is possible that individuals are either receiving insufficient support from their employers generally, or are returning to work prematurely before they have adequately recovered from their injuries if they feel that their role is in danger.

The nature of the data used for this study means that no information on an individual's general health can be accessed, and therefore it cannot be determined whether this has had an impact on any unsuccessful RTW attempts. These datasets can be analysed to determine the services that individuals access, which would give a more holistic picture of the injuries sustained by the individual and the treatment that they are accessing, and should be the focus of future research. This will enable the identification of rehabilitation pathways synonymous with failed or sustained RTW.

With the dataset, we were unable to include some other factors that have been shown to be important in RTW studies, such as occupation and employer size [7, 11, 26]. Addition of these factors may account for the observed differences between failed and sustained RTW groups, but we were not able to factor these into the models. Additionally, RTW success is correlated with psychological problems [27], and the analysis of services accessed would be valuable to determine any correlations. Through the capture of this information and the determination of whether particular occupations or psychological issues are related to poorer work outcomes, greater support can be provided to injured individuals early in their recovery

to assist appropriate return to work. Other future research could focus on identifying those who failed to RTW at all over the follow-up period, as these cases were excluded from the analysis. Additionally, it would be worthwhile to identify risk factors associated with multiple RTW failures.

Strengths of this study include the use of a population-based, well-defined dataset, as well as the application of outcome measures that have been validated in previous studies of work-related injury [11]. Analytic models have examined the impact of multiple predictors on the outcome of failed or sustained RTW, which provides insights into negative and positive RTW outcomes.

A limitation of this study is the reliance of income replacement data as a proxy for RTW. Further, to register a failed RTW attempt, a particular pattern had to be observed, and it is possible that this pattern does not apply to all individuals who had a RTW failure. Resumption of income replacement does not necessarily mean a RTW failure, as it could also indicate absence required for injury-related treatment (e.g. surgery) or the lack of sustainable employment options [14]. Future studies could cross-reference the time spent back on wage replacement with any treatment or services individuals may be receiving.

Conclusion

This analysis of population-based transport injury compensation claims data has provided insights into the predictors of negative and positive RTW outcomes. It found that females, older individuals, individuals with whiplash or dislocations, and those with the most severe injuries (admitted to hospital) were most likely to experience a failed RTW. Conversely, individuals who were male, younger, had contusions, abrasions, sprains, strains, or fractures other than limb fractures, and who received immediate emergency or ambulance treatment but did not require subsequent hospital admission, were more likely to have sustained RTW. This information may assist injury system regulators, insurers, employers and healthcare professionals identify risk factors at the time of injury in order to focus on particular

individuals that may require greater, or possibly more specific, support to achieve successful and sustainable employment outcomes.

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