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Predictors of Sustained Return to Work after Work-Related Injury or Disease

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MONASH University
Injury Research Institute

ISCRR
Institute for Safety, Compensation and Recovery Research

Overview

- Current measures
- Aims
- Study methods and results
- Study conclusions
- Recommendations

Background

- Work-related injury and illness is common: incidence of 6 per 100 person-years (Australia)
- Return to work (RTW) is a key outcome
  - Measure policy effectiveness
  - Measure intervention effectiveness
  - Compare subgroups, employers
  - Measure costs

Background

- Different ways to measure RTW
- RTW is complex
  - Modified working hours
  - Modified duties
  - Recurrence of work disability
  - [Work role funtioning]

Background

- RTW often
  - Cross-sectional
  - First RTW
- Work disability recurrences are common (20-60%)

Aims

- To define RTW outcome measures from Workers' Compensation Claims Records (*compensation perspective*)
- To identify predictors of *first* RTW vs. *sustained* RTW:
  - Who is at risk for recurrences?
- **Identifying risk factors for recurrences will help remove barriers to successful RTW**

Study Population

- Compensation Research Database at ISCRR
- WorkSafe Victoria compensation payments
- Only claims with income compensation
- Claims started 1-1-2001 to 1-1-2005
- 2-year follow up window
- ‘Repeat claims’ excluded

Methods: Payment Patterns

1. Continuous payments with a permissible gap

2. 'RTW'

3. 'RTW' and work disability recurrence

Methods: RTW Outcomes

1) ***Time to first full RTW***

   Days to the first >7 day gap

   Censored: if no first RTW in 2 years

2) ***Time to sustained full RTW***

   Days between first & last payment.

   Censored: if no sustained RTW in 2 years

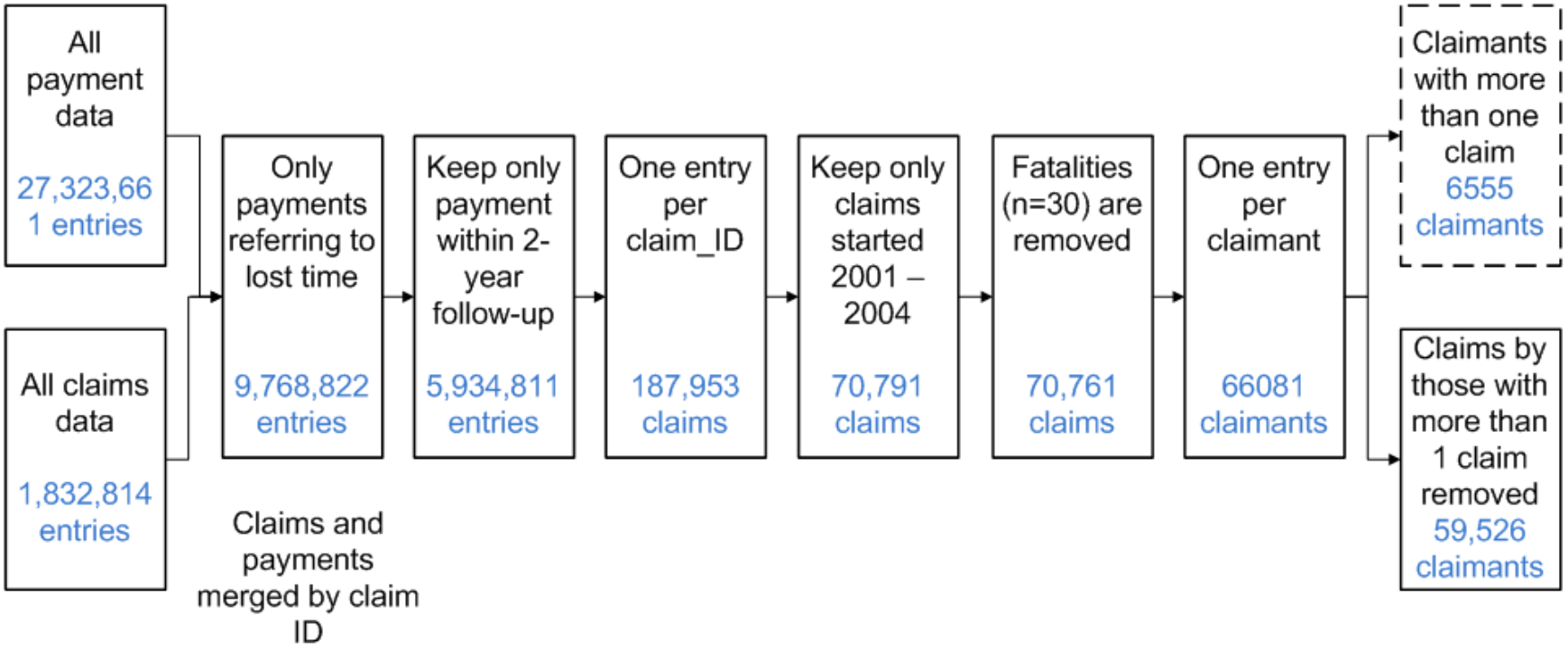
3) ***Work disability recurrences***

   Payment cessations of >7 days

Methods: RTW Outcomes

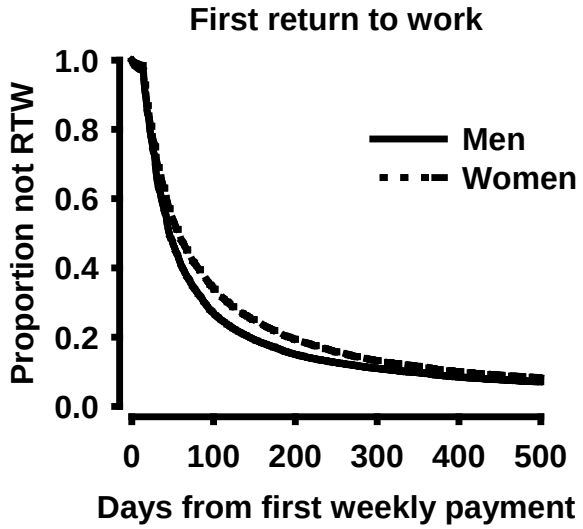
- Regression models relating
  - Demographic
  - Occupational
  - Workplace
  - Injury characteristics, to RTW outcomes
- First and final RTW: survival analysis
- Recurrences: binary logistic regression

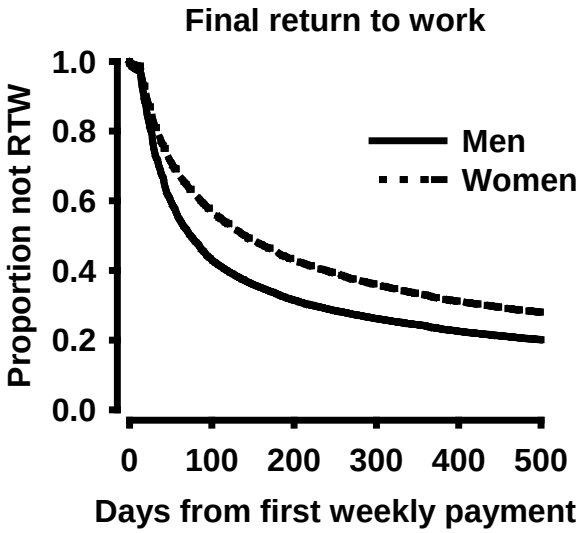
Chart: Study Population

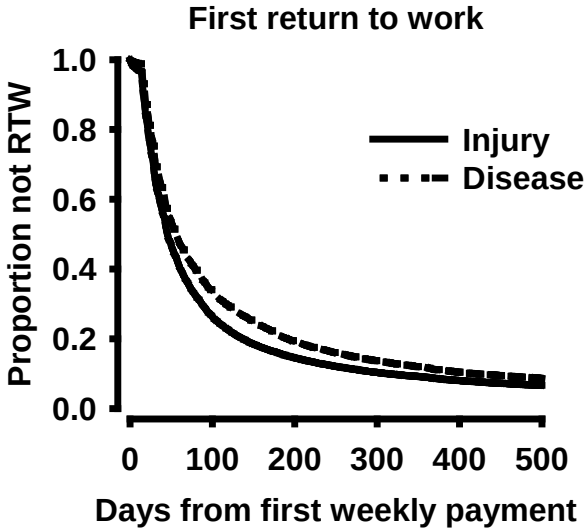


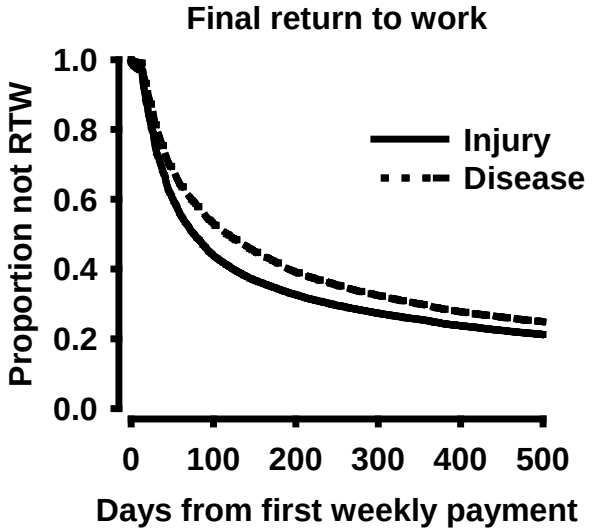
Results: Return to work

Injury	Illness
First RTW	
5.5% did not attempt a full RTW	7.1% did not attempt a full RTW
46 days until a first return (median)	56 days until a first return
Sustained / final RTW	
20% did not achieve sustained RTW	23% did not achieve sustained RTW
77 days until sustained RTW (median)	117 days until sustained RTW


First return to work
Proportion not RTW
1.0
0.8
0.6
0.4
0.2
0.0
Men
Women
0
100
200
300
400
500
Days from first weekly payment


Final return to work
Proportion not RTW
1.0
0.8
0.6
0.4
0.2
0.0
Men
Women
0
100
200
300
400
500
Days from first weekly payment

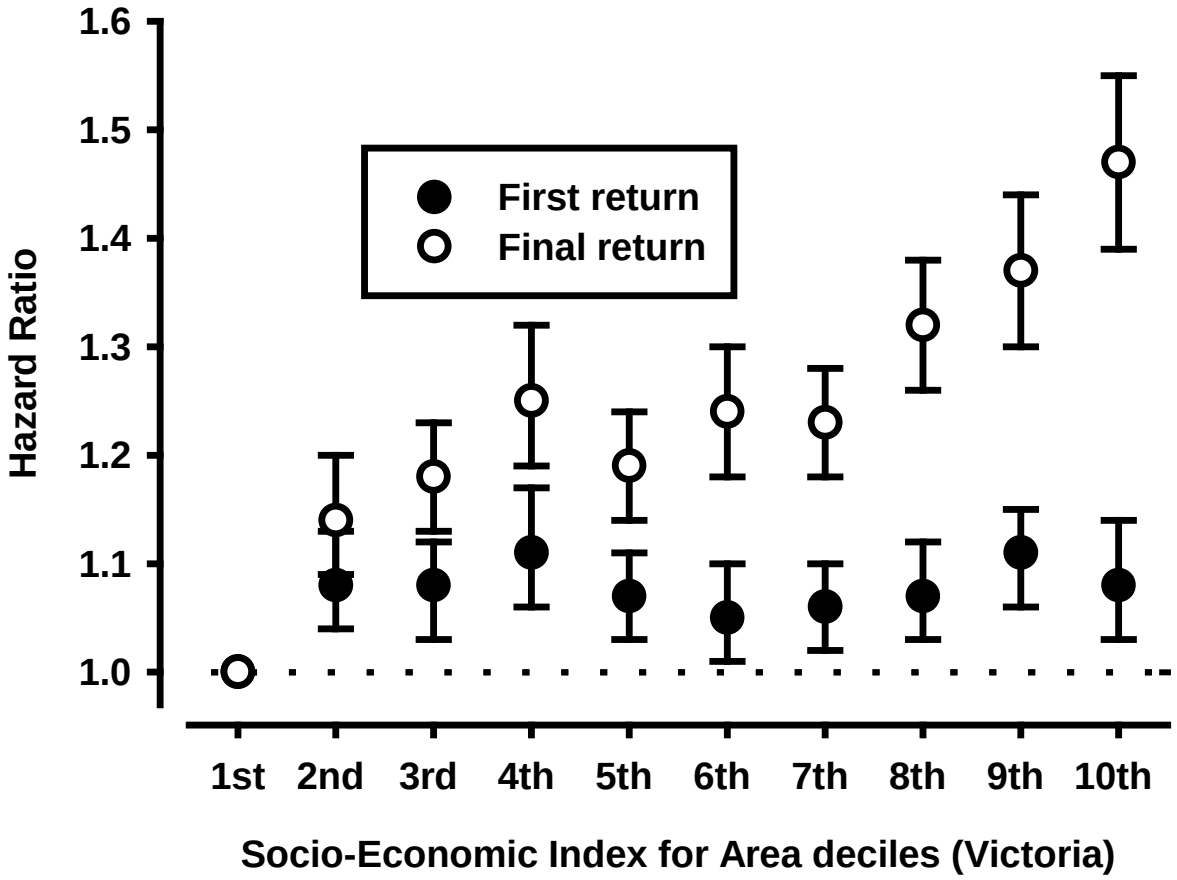

First return to work
Proportion not RTW
1.0
0.8
0.6
0.4
0.2
0.0
Injury
Disease
0
100
200
300
400
500
Days from first weekly payment


Final return to work
Proportion not RTW
1.0
0.8
0.6
0.4
0.2
0.0
Injury
Disease
0
100
200
300
400
500
Days from first weekly payment

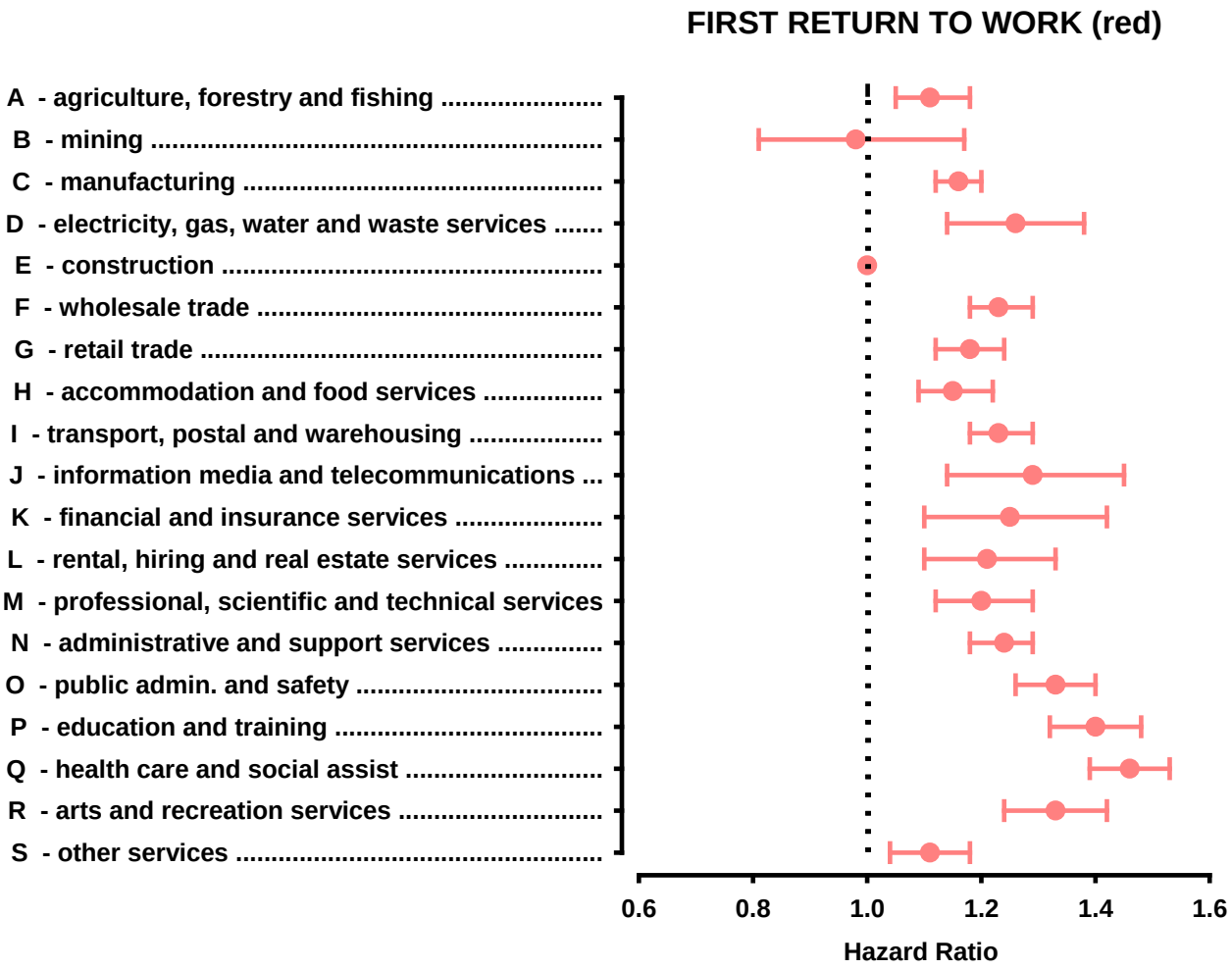
Predictors of Return to Work

	First RTW	Sustained RTW
Age	Young	Young
Gender	Male	Male
Socio-Economic Index for Area, SEIFA	Mid & High SES	High SES
Prior Income	-	Lowest & highest
Employment type (FT/PT)	-	PT
Occupation	-	-
Industry	Health care, educ.	Admin., educ.
Affliction	Wounds, burns	Wounds, burns
Bodily location of affliction	Limbs, head	Limbs

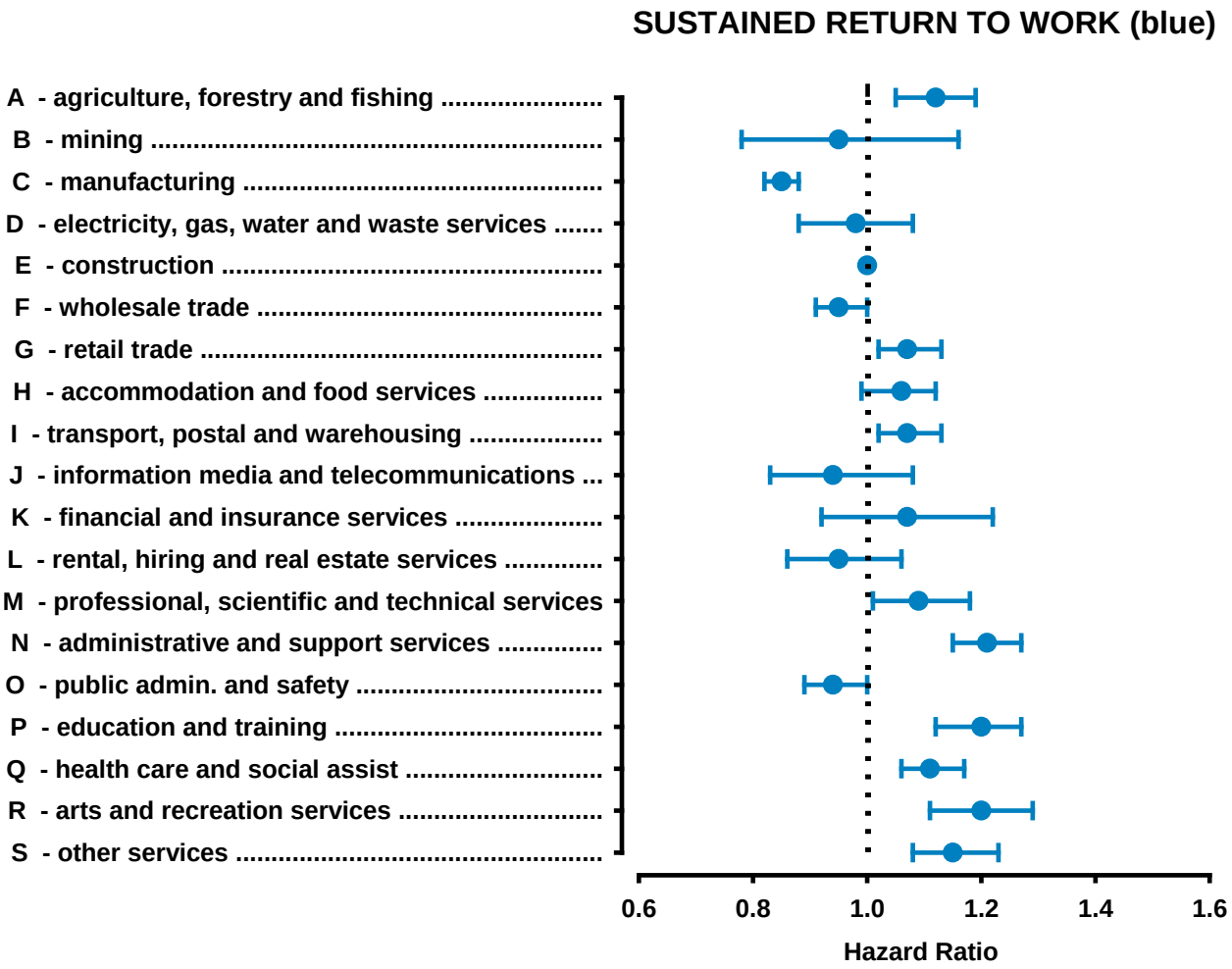
SEIFA deciles

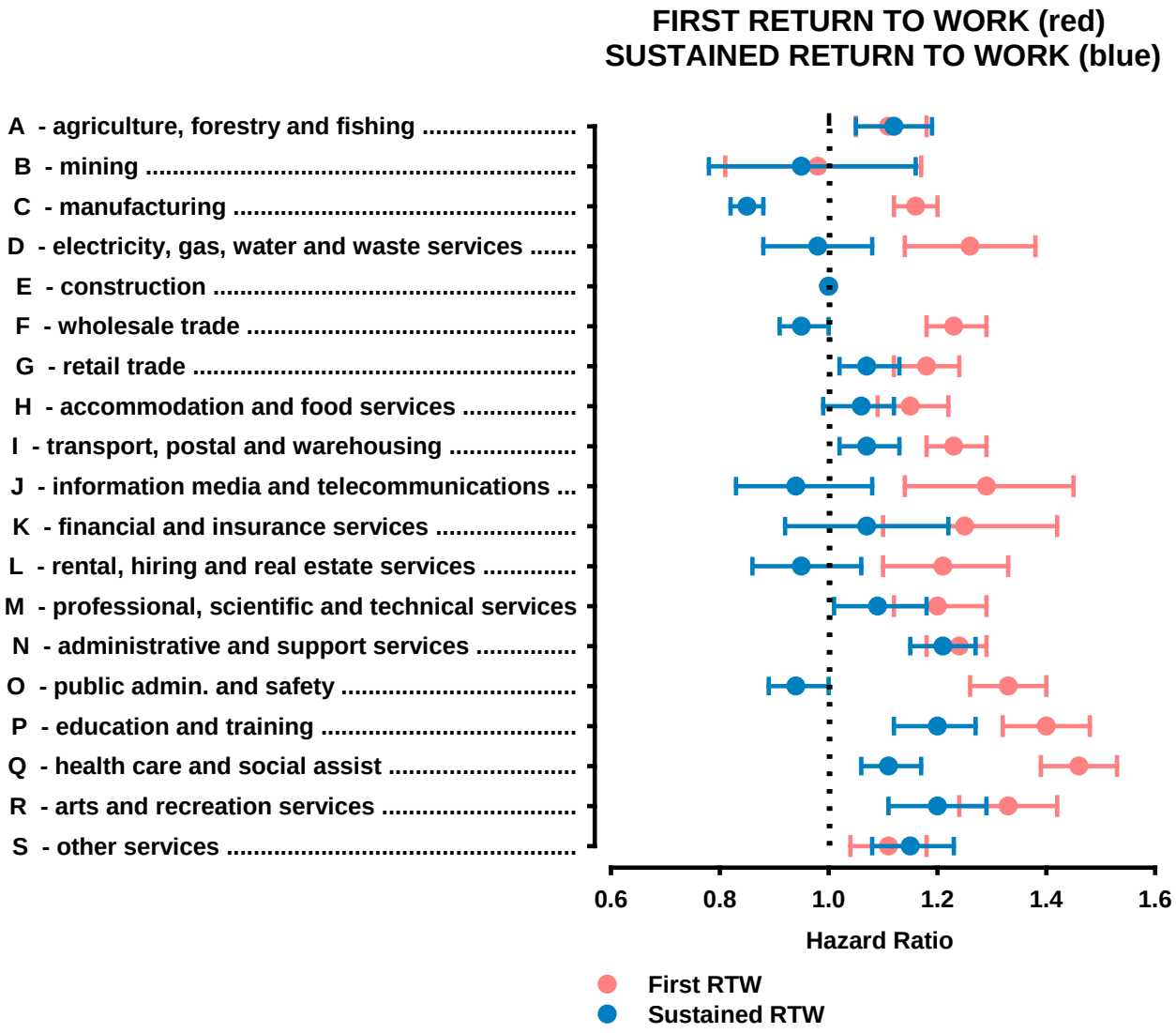


First RTW


FIRST RETURN TO WORK (red)
A - agriculture, forestry and fishing
B - mining
C - manufacturing
D - electricity, gas, water and waste services
E - construction
F - wholesale trade
G - retail trade
H - accommodation and food services
I - transport, postal and warehousing
J - information media and telecommunications
K - financial and insurance services
L - rental, hiring and real estate services
M - professional, scientific and technical services
N - administrative and support services
O - public admin. and safety
P - education and training
Q - health care and social assist
R - arts and recreation services
S - other services
0.6
0.8
1.0
1.2
1.4
1.6
Hazard Ratio

Sustained RTW




FIRST RETURN TO WORK (red)
SUSTAINED RETURN TO WORK (blue)
A - agriculture, forestry and fishing
B - mining
C - manufacturing
D - electricity, gas, water and waste services
E - construction
F - wholesale trade
G - retail trade
H - accommodation and food services
I - transport, postal and warehousing
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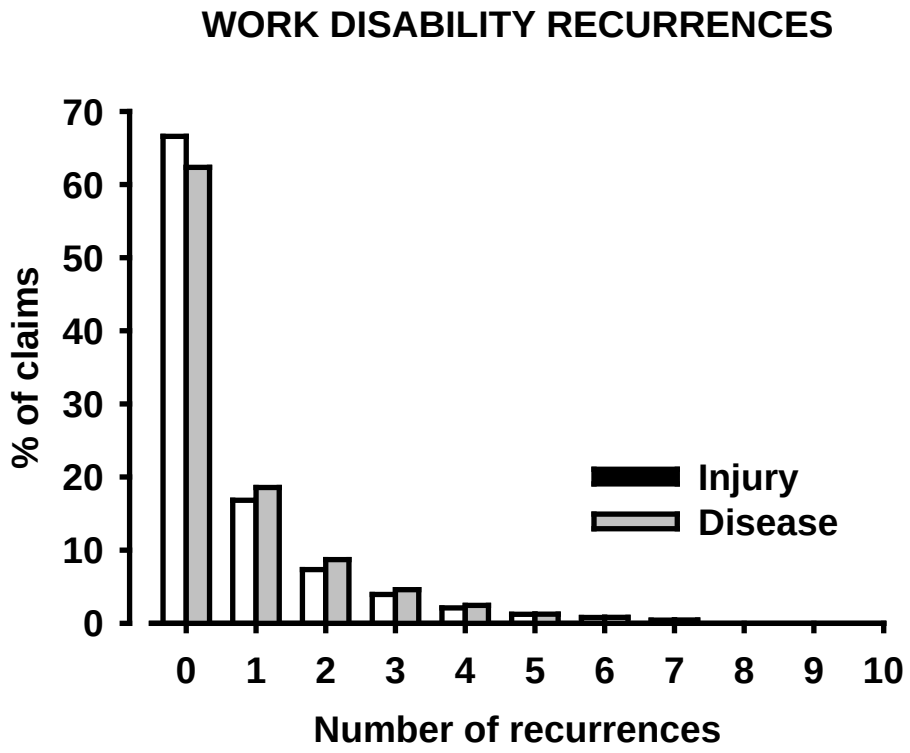
0.6
0.8
1.0
1.2
1.4
1.6
Hazard Ratio
First RTW
Sustained RTW

Work Disability Recurrences

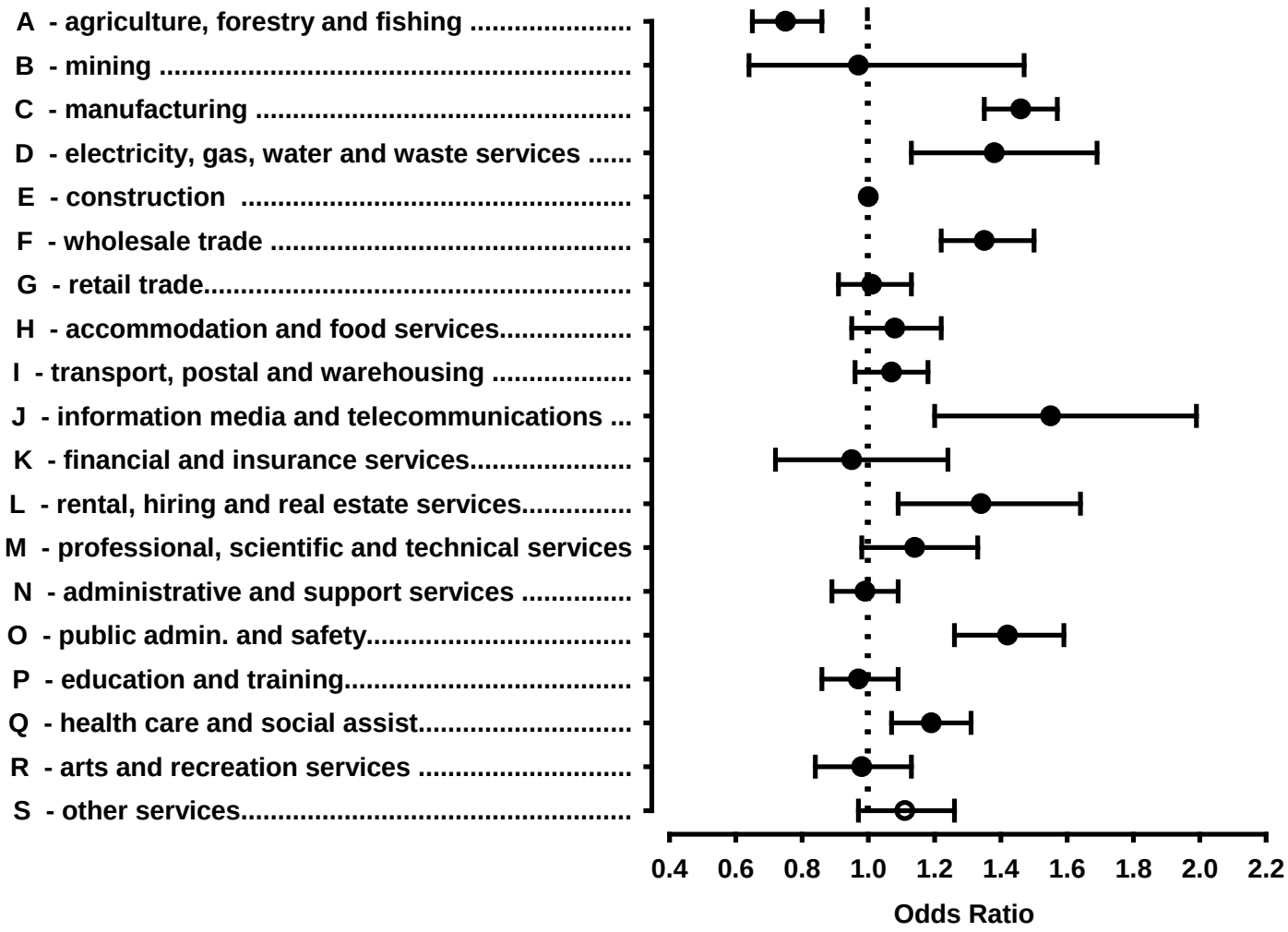
- 37% with a RTW had ≥1 ‘recurrence’
- Gap duration median 26 days [p25-75: 14-53]



Work Disability Recurrences

	Recurrences 19,650 / 52,577
Age	Older
Gender	Female
Socio-Economic Index for Area	Lowest SES
Prior Income	Mid-range
Employment type (FT/PT)	-
Occupation	Labourers
Industry	Media and telecom.; manufacturing
Affliction	Musculoskeletal (illness); joint/ligament muscle/tendon (injury)
Bodily location of affliction	Multiple; neck

WORK DISABILITY RECURRENCE
(One or more vs. none)



Conclusions

- First RTW ≠ sustained RTW: Time to sustained RTW was 1.8x longer than time to first RTW
- Recurrences are common
- Older workers, women and labourers most at risk
- More common with traumatic joint/ligament or muscle/tendon injury & musculoskeletal disorders

Recommendations

- For workers in
  - Manufacturing
  - Media/telecommunications
  - Public admin/safety

  A change in emphasis from *timely* RTW to education and secondary prevention may improve long-term RTW outcomes

Further Research

- Modified hours and modified duties and sustained RTW
- Cessation of payments: RTW vs. study vs. unemployment benefits

Acknowledgements

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- Study is based on claims data from the Compensation Research Database held at the Institute of Safety, Compensation and Recovery Research (Melbourne)