Work-related Injuries in Middle-aged and Older Workers in Newfoundland and Labrador

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WorkplaceNL

- Canada's population is aging

- Older adults are healthier and living and working longer than those from previous generations (Canadian Institutes for Health Information, 2011)

- Labour force participation rate for older adults in Canada has increased significantly over the last decade (Statistics Canada, 2014)

- Middle-aged and older workers offer many benefits to employers, but may pose significant challenges, including increased risk for specific types of injuries

- There is limited information on rates, risk factors, and health-related outcomes of work-related injuries among middle-aged and older workers in Canada

- Such information can be useful for planning future health and safety measures at work
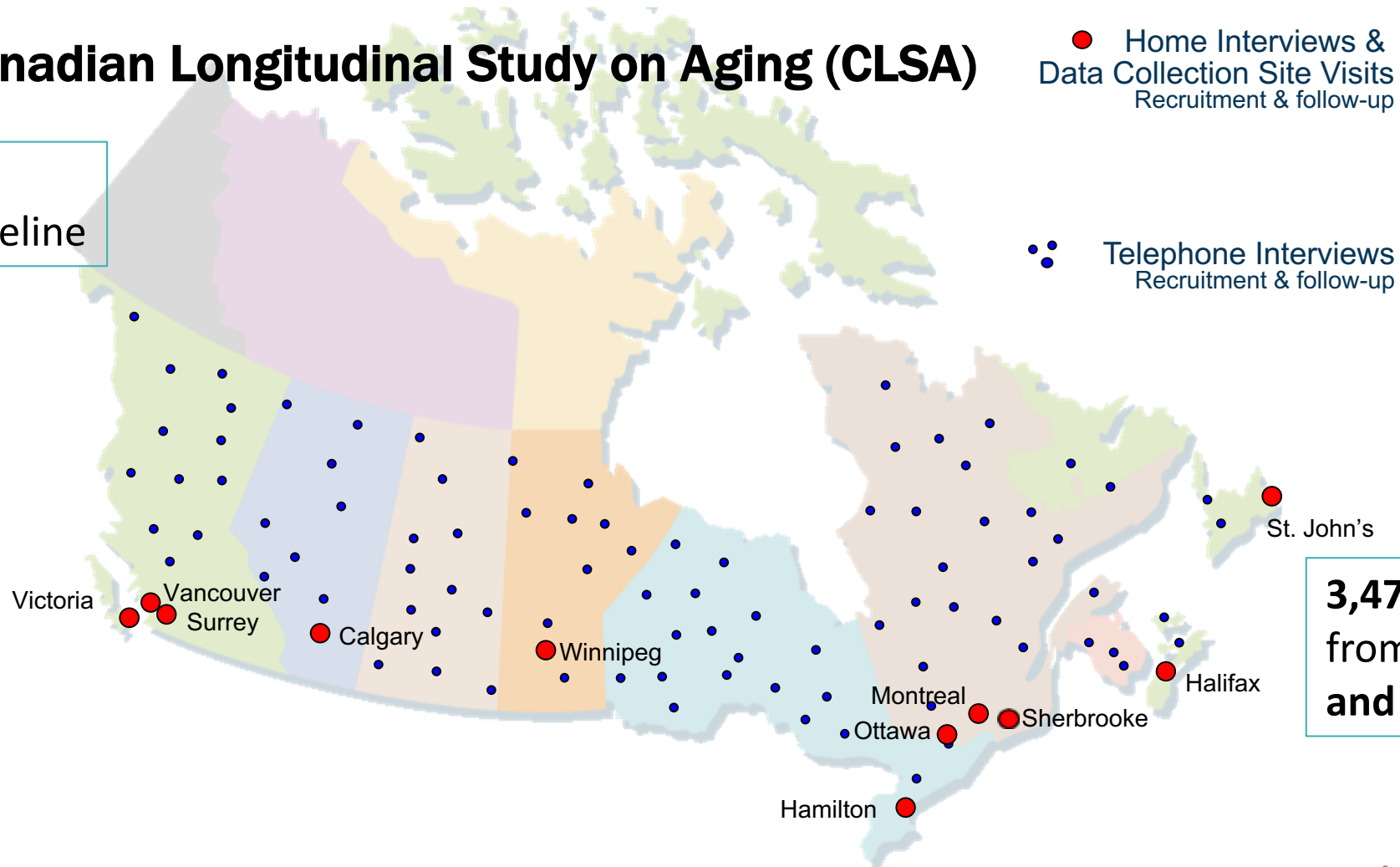
PROJECT OBJECTIVES

1. To describe the characteristics of Newfoundland and Labrador CLSA participants and compare them to Canada

2. To examine the incidence of work-related injuries among middle-aged and older workers in Newfoundland and Labrador and the other provinces

3. To describe the characteristics associated with work-related injuries among middle-aged and older workers in Newfoundland and Labrador and compare these to the whole of Canada

4. To identify the factors associated with work-related injuries among middle-aged and older workers in Newfoundland and Labrador and Canada

5. To examine the associations between work-related injuries and various health outcomes (e.g., self-rated general and mental health, use of health services) in middle-aged and older adults as a result of work-related injuries

Study Measures

- Sociodemographic characteristics

  - age, sex, marital status, country of birth, location of residence, language most spoken at home, education, household income

- Labour force participation

  - current working status, working schedule, length of time worked at current employer, type of work, business or industry sector

- Injuries

  - activity-limiting injuries, cause of injury, type pf activity when injured, type of injury, work-related injuries

- Health measures

  - self-rated general health, self-rated mental health, self-rated healthy aging, eye-sight rating, hearing rating, chronic conditions, psychological distress, depression, posttraumatic stress disorder (PTSD), life satisfaction

- Health-related behaviours

  - smoking, alcohol use

- Health care utilization

  - over-night hospitalization, use of emergency departments, family physician visits, psychologist visits
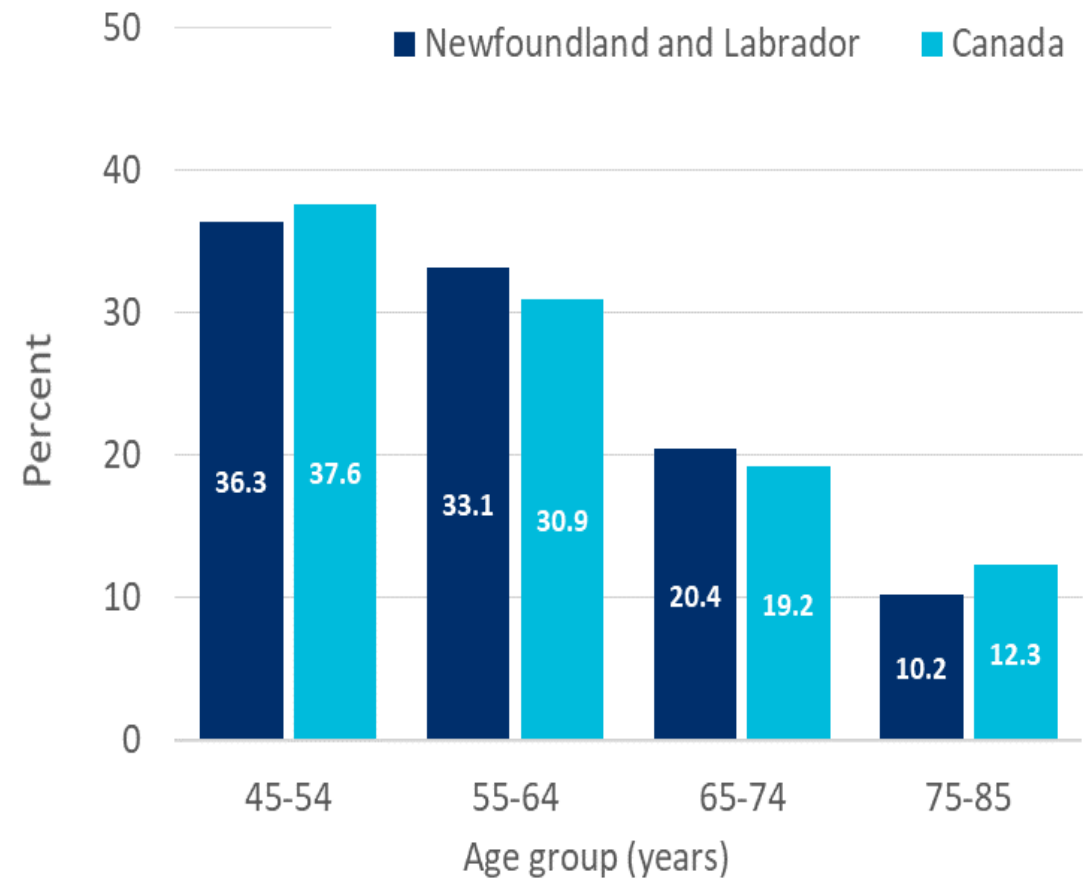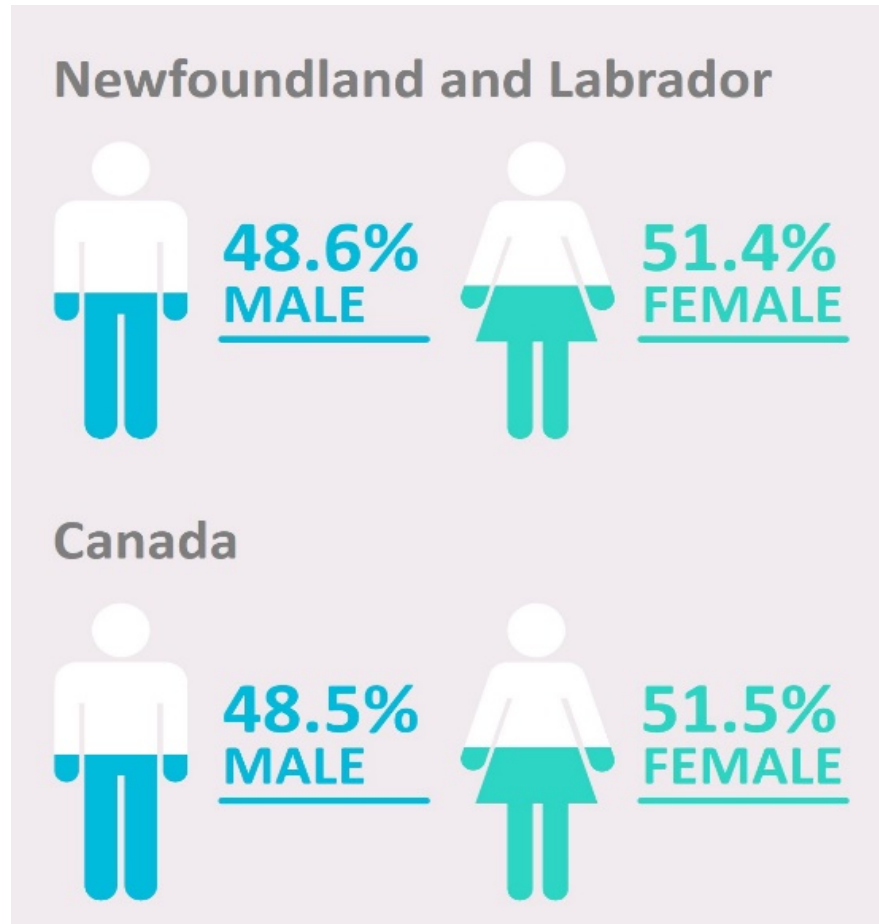
Work-related injuries

- Data on "cause of injury" and "type of activity when injured" were used to identify persons with a history of work-related injuries

  ➢ Cause of injury was "an incident in your workplace"

  ➢ Type of activity was "working at a job or business including travel to or from work" when injured

Data analysis:

- Descriptive analyses (e.g., injury rates across provinces)
- Cross-tabulations to compare profiles of those with and without work-related injuries from across Canada and in Newfoundland & Labrador
- Multivariate regression analyses to determine factors associated with work-related injuries
- Multivariate regression analyses to examine the association between work-related injuries and various health outcomes
  - Cross-sectional – health measures
  - Longitudinal – psychological distress, health care utilization

Newfoundland and Labrador

48.6% MALE   51.4% FEMALE

Canada

48.5% MALE   51.5% FEMALE

Bar chart — Percent by Age group (years)

Legend: Newfoundland and Labrador, Canada

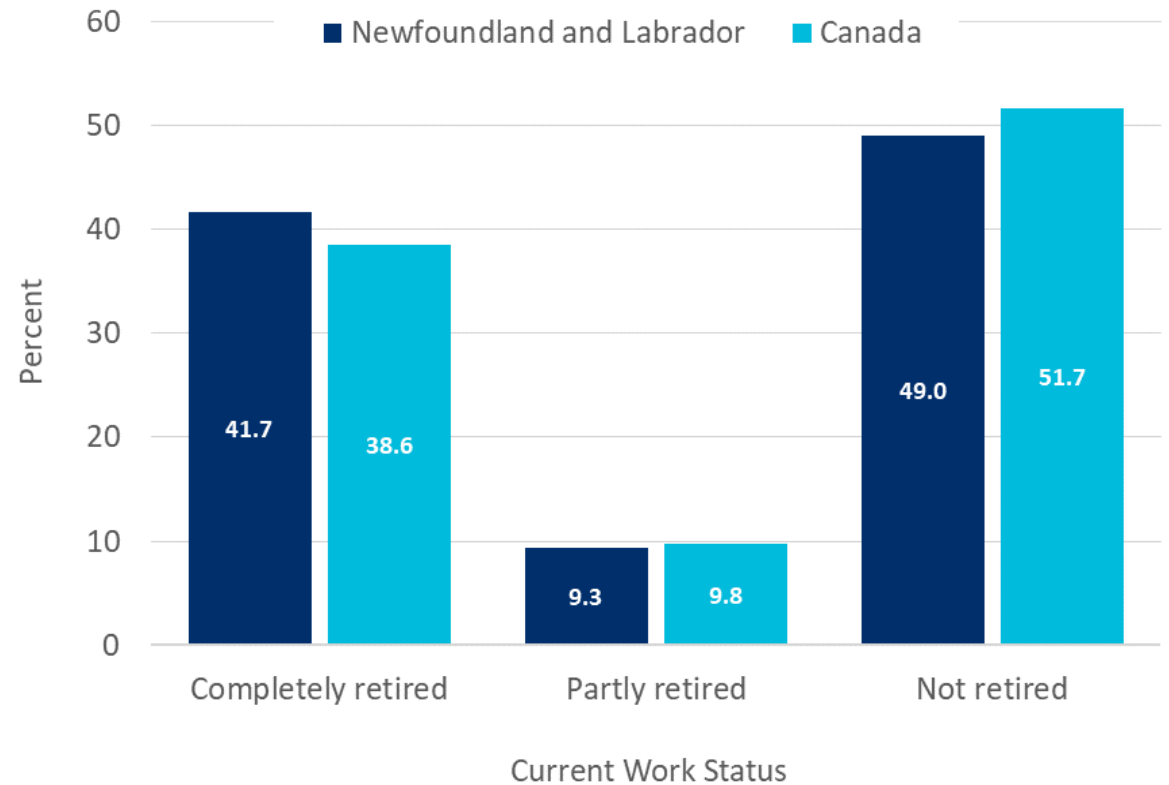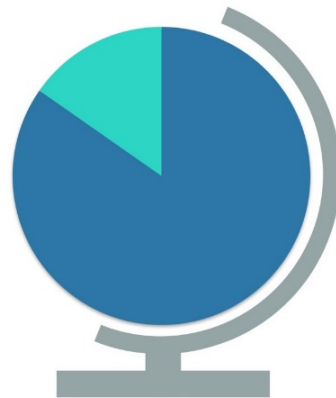| Age group (years)	Newfoundland and Labrador	Canada
45-54	36.3	37.6
55-64	33.1	30.9
65-74	20.4	19.2
75-85	10.2	12.3

Newfoundland and Labrador

- Born in Canada (95.8%)
- Born outside of Canada (4.2%)
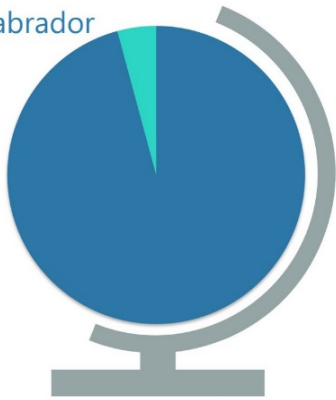
Canada

- Born in Canada (84.7%)
- Born outside of Canada (15.3%)

Percent

Newfoundland and Labrador ■ Canada

Current Work Status	Newfoundland and Labrador	Canada
Completely retired	41.7	38.6
Partly retired	9.3	9.8
Not retired	49.0	51.7

Current Work Status

FINDINGS

Incidence of work-related injuries per 10,000 middle-aged and older workers by Canadian province

British Columbia
498

Alberta
307

Saskatchewan
392

Manitoba
399

Ontario
312

Quebec
377

Prince Edward Island
362

Newfoundland & Labrador
262

New Brunswick
392

Nova Scotia
387
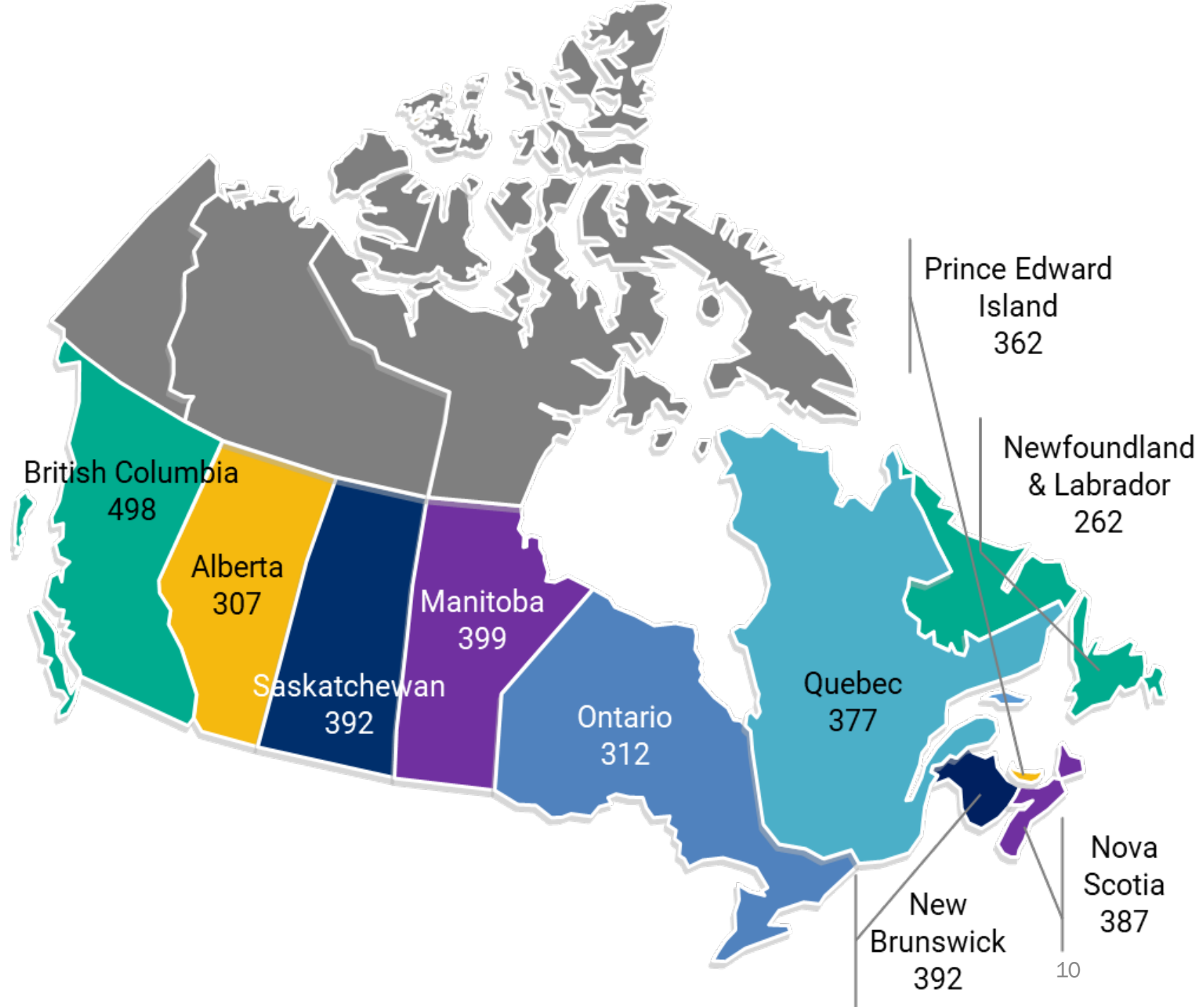
WORK-RELATED INJURIES
Workers Aged 45+ Years

10

FINDINGS FROM NOC

OCCUPATION CHARACTERISTICS

INJURED WORKERS HAD OCCUPATIONS REQUIRING:

LOCATION

52% Inside Work

48% Outside Work

BODY POSITION

26% Sitting

43% Sitting, standing, and/or walking

26% Bending, stooping, kneeling, crouching

EXPOSURE TO HAZARDS
(From least to most frequent exposures)

1. Radiation
2. Flying Particles and Flying Objects
3. Fire, Steam, and Hot Surfaces
4. Dangerous Chemical Substances
5. Biological Agents
6. Electricity
7. Dangerous Locations
8. Equipment, Machinery, and Tools

12

FINDINGS

*Predictors of Work-Related Injuries in **Newfoundland and Labrador** Using Data from the Canadian Longitudinal Study on Aging (CLSA)*

Notes:

Work-related injuries studied among those who were employed

CI = confidence interval; *$p < .05$

Reference categories: Participants aged 55-85 years; Males; Non DCS; Working daytime schedule or shift; Occasional smoker/Former daily smoker/Former occasional smoker/Never smoked

Predictors	AOR	95% CI	
Age			
45-54 years	2.676*	1.227	5.834
Sex			
Male	0.676	.342	1.335
Current work schedule			
Evening/night/rotating shift, seasonal, on call, or casual but called as need arises	2.534*	1.219	5.269
Type of Smoker			
Daily smoker/Occasional smoker (former daily smoker)	2.212*	1.000	5.019

13

There is a **GREATER CHANCE** of being injured at work if workers...

ACROSS CANADA

Are Male

Have Vision Problems

Work Full-Time (30+ hrs/week)

Smoke

Have an Annual Income (<$50,000)

Have a Mood Disorder

Work Irregular Hours

Are Single

FINDINGS (CANADA)

Predictors of Health-Related Outcomes

Variables	General Health	Perceived Mental Health	Healthy Aging
	AOR (99% CI)	AOR (99% CI)	AOR (99% CI)
Age group: 45-54 years	1.092 (0.955, 1.248)	0.767*** (0.646, 0.911)	0.913 (0.799, 1.043)
Sex: Female	1.143* (0.995, 1.312)	0.949 (0.796, 1.131)	1.139* (0.993, 1.306)
Work-related injuries	0.590*** (0.416, 0.836)	0.804 (0.509, 1.268)	0.554*** (0.398, 0.771)

Predictors of Health-Services Utilization

Variables	Family Physician Visits	Psychologist Visits	Emergency Department Visits	Overnight Hospitalization
	AOR (99% CI)	AOR (99% CI)	AOR (99% CI)	AOR (99% CI)
Age: 45-54	0.600*** (0.538, 0.669)	1.733*** (1.476, 2.034)	0.901* (0.821, 0.989)	0.547*** (0.467, 0.640)
Sex: Female	1.575*** (1.408, 1.763)	1.238** (1.051, 1.457)	0.997 (0.906, 1.096)	0.965 (0.827, 1.126)
Work-related injuries	1.327 (0.931, 1.892)	1.256 (0.829, 1.904)	1.563*** (1.231, 1.985)	1.613** (1.109, 2.345)

Predictors of Life Satisfaction and Psychological Distress

Variables	Life Satisfaction	Psychological Distress
	Beta Coefficient (99% CI)	Beta Coefficient (99% CI)
Age group: 45-54 years	0.013 (-0.197, 0.223)	0.49*** (0.30, 0.69)
Sex: Female	0.065 (-0.151, 0.282)	0.66*** (0.46, 0.87)
Work-related injuries	-1.696*** (-2.397, -0.995)	1.05** (0.30, 1.79)

- We analyzed data from 3,470 adults in Newfoundland and Labrador and 51,250 middle-age and older adults in Canada who had a baseline assessment and one follow-up assessment obtained as part of the *Canadian Longitudinal Survey on Aging (CLSA)* data.

- The incidence of work-related injuries in middle-aged and older workers in Newfoundland and Labrador was 262 per 10,000, which was the lowest rate of all Canadian provinces.

- Most injuries were classified as sprains or strains (24.8%).

- In Newfoundland and Labrador the likelihood of work-related injuries was higher for:

  a. workers aged 45-54-years vs 55-85-year-olds,

  b. those who worked non-regular work schedules as opposed to day schedules, and

  c. Smokers vs non-smokers.

- Additional risk factors emerged for Canada as a whole, which may be due to the larger sample size

- For Canada, the likelihood of work-related injuries was increased for

  a. workers aged 45-54-years,

  b. men,

  c. those with lower personal income,

  d. those working non-regular schedules or working full-time,

  e. those with a mood disorder, those with vision problems, and

  f. smokers.

Health & Well-being

- Work-related injuries were also associated with poorer perceived general health, healthy aging, and life satisfaction, and higher psychological distress when we controlled for the effects of age, sex, and province of residence.

HEALTH SERVICES USE

- Work-related injuries also increased the likelihood of emergency department visits and overnight hospitalizations within about 18 months after the work-related injury.

STUDY LIMITATIONS

- Small sample size of the CLSA participants from Newfoundland and Labrador

- Self-reported data

- Lack of time lag between work-related injuries and some of the health outcomes

- CLSA lacks a range of job- and work-related variables (NOC codes collected for Newfoundland and Labrador participants reporting job and industry)

- Use of survey vs administrative data to examine work-related injuries

- Knowledge about the most common types of injuries and risk factors can be used in instituting *targeted workplace education and injury-related prevention programs*
  - Create user-friendly educational materials with emphasis on healthy lifestyle, regular vision and hearing tests, stress management
  - Communicate to the more vulnerable groups of workers in NFL:
    - Those with low socio-economic status
    - Those working in occupations requiring the use of equipment, machinery, and tools

- Knowledge related to health outcomes can *inform and enhance the creation and maintenance of safe and healthy work practices and workplaces*
  - Improve access to mental health supports and services
  - Ensure that accommodations are made for changes in vision and hearing

Employment and Social Development Canada   Emploi et Développement social Canada   Canada

MENTAL HEALTH
in the Workplace

A psychologically healthy workplace is a respectful and productive environment that makes every reasonable effort to promote and protect the mental health of employees.

BENEFITS OF A PSYCHOLOGICALLY HEALTHY WORKPLACE

BETTER
- engagement
- morale
- satisfaction
- retention and recruitment
- productivity

REDUCES
- absenteeism
- grievances
- health costs
- medical leave/disability
- workplace injuries

For more information: canada.ca/workplace-health-safety

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