

Hyperlipidemia's Hidden Real World Impact on Workers' Compensation Claims in the United States

Richard A. Brook, MS, MBA¹; Stephen A. Schramm, MA²; Alek A. Drnach, MS²; Eric M. Rosenberg, MA²

¹Better Health Worldwide, Newfoundland, NJ. ²Workpartners, LLC, Pittsburgh, PA.

Background

- Hyperlipidemia (HLP)¹:
 - Is a systemic metabolic illness defined by unusually high amounts of lipids in the blood, including cholesterol and triglycerides
 - Has been connected to a variety of health issues, including metabolic syndrome (diabetes, obesity, and hypertension) and poses major hazards to human health
 - US prevalence in 2017-2020 was reported as 36.1% (95% CI, 33.5%-38.7%)²
- Workers' Compensation (WC) insurance provides medical care, wage replacement, rehabilitation, and death benefits for work-related injuries or illnesses.
- Employers are required to provide Workers' Compensation coverage, either through commercial insurance or self-insurance arrangements.³
- Large US employers are often self-insured under rules established by the states.
 - Most states provide wage replacement payments after lost work time exceeds a number of days and is set by the individual states
 - Wage replacement benefits are typically designed to compensate for approximately two-thirds of lost wages
- Workers' Compensation analyses are frequently all-cause which overlooks the variation in claim rates and outcomes driven by industry and employer' safety culture.
- Workers' compensation claims include specific coding for body part, nature of injury, and cause.

Objectives

- We analyzed the impact of Hyperlipidemia (HLP) on employer Workers' Compensation (WC) claim rates, complexities of WC claims analyses, and specific claim reasons for employees in different industries.

Methods

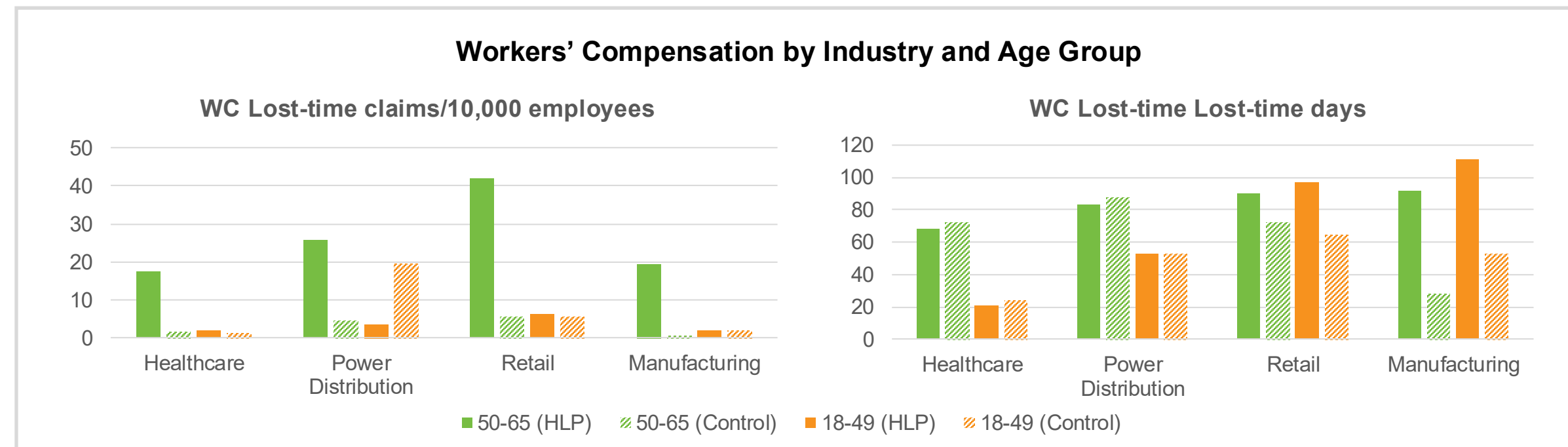
- Retrospective analysis of four large employers (with over 50,000 employees each) in the Healthcare, Power Distribution, Retail, and Manufacturing Industries in the Workpartners Research Reference Database (RRDb) from August 2022—July-2025.
- Employees with The RRDb has been used in prior employee,³⁻⁸ WC,⁶⁻⁸ and caregiver⁹⁻¹⁰ research.
 - ≥1 year of continuous health plan and WC eligibility were assigned to younger (18-49) and older (50-65) age groups
 - ≥2 prior medical claims for Hyperlipidemia (ICD-10=E78.0-E78.4) were assigned to the HLP cohort
 - No Hyperlipidemia medical claims were eligible for the Control Cohort
 - Medical claims for any of 43 chronic conditions¹¹ were excluded from the Control Cohort
- For both age-bands, we calculated the following study outcomes for the Hyperlipidemia and Control cohorts Workers' Compensation:
 - Claim incidence (Lost-time claims/10,000 employees)
 - Medical and indemnity (lost time) cost
 - Lost-time (absence days following the waiting periods) were calculated
- The study outcomes were compared between cohorts for both age-bands using two sided, two sample:
 - Z-scores for annualized incident rates and percents (binary outcomes)
 - T-tests for costs and lost-time

Results

- 54,155 employees met study criteria with 22,950 older employees.

Age at Index	Industry										Total N
	Healthcare		Power Distribution		Retail		Manufacturing		Study (all)		
	HLP	Control	HLP	Control	HLP	Control	HLP	Control	HLP	Control	
50-65	8,958	834	4,171	1,047	4,219	759	2,616	346	19,964	2,986	22,950
18-49	6,320	3,890	2,971	9,129	3,491	3,321	1,232	841	14,014	17,181	31,195
Total	15,278	4,724	7,142	10,176	7,710	4,080	3,848	1,187	33,978	20,167	54,145

- Annualized WC lost-time claims/10,000 employees were higher for those with HLP in all sectors for older employees, and significantly higher for Retail (42 vs 6, P=0.048) and Manufacturing (19 vs 2, P<.005).



Older employees in the retail industry were significantly different than controls (P<0.05). All other comparisons similar (P>0.05)

- Across all industries, the most common body parts affected were shoulders, knees and back, and the most common nature of injury reasons were sprains, followed by fractures, and bruises.

Common Body Parts Affected (Rank within Employer Industry)

Body Part affected	Industry							
	Healthcare		Power Distribution		Retail		Manufacturing	
	Rank	% of industry claims	Rank	% of industry claims	Rank	% of industry claims	Rank	% of industry claims
Shoulders	1	19.7%	1	18.9%	1	19.0%	1	40.0%
Knees	3	9.4%	2	15.6%	3	15.5%	7	4.4%
Back	2	18.9%	3	10.0%	2	12.5%	N/A	0%
Other body part, ranked 4th:	Head	7.9%	Arms	8.9%	Fingers	8.0%	Elbow	6.7%

N/A not applicable (no claims). *Manufacturing claims had additional specificity:

- "Shoulders" claims were a combination of Left Shoulder (17.8%), Right Shoulder (13.3%), and Shoulders (8.9%).
- Using the combined values, "Multiple parts" were ranked 2nd (13.3%) and included multiple trunk (6.7%), multiple body parts (4.4%) and Multiple upper extremities (2.2%). Neither Upper back (thoracic) or lower back had any claims

Common Nature of Injury Reasons

Nature of Injury	Industry							
	Healthcare		Power Distribution		Retail		Manufacturing	
	Rank	% of industry claims	Rank	% of industry claims	Rank	% of industry claims	Rank	% of industry claims
Sprains/Strains	1	50.4%	1	60.0%	1	39.5%	2	20%
Fractures/ breaks	3*	3.9%	N/A	0	2	21.5%	3	11.1%
Bruises/Contusions	2	38.6%	4	2.2%	3	14.5%	N/A	0.0%
Cut/Laceration/Puncture	3*	3.9%	8†	1.1%	4‡	6.5%	N/A	0.0%

N/A not applicable (no claims). Nature of Injury for:

*Healthcare tied for fractures/breaks and Cuts/Lacerations/Punctures

†Power Distribution had 4 categories tied with 2.2% of claims, Cut/Laceration/Puncture had 6 categories tied with 1.1% of claims

‡Retail had Cut / Laceration / Puncture tied with Hernias with 6.5% of claims each

Conclusions

- Older employees with HLP showed a varied increase in WC lost time Retail: 8x, Manufacturing: 40x, Healthcare: 11x & Power Distribution: 6x incident rates vs those without chronic conditions, but younger employees had minimal differences.
- WC Costs also vary substantially across industry.
- This marked industry variation highlights the complexity of analyzing WC data. Future studies may benefit from regression adjustment to account for company and industry differences.

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