

# Analyzing Medical Patterns and Catastrophic Health Expenses in Occupational Injuries Victims in South Korea

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# **BACKGROUND**

- •In South Korea, 'Workers Compensation Insurance(WCI)' is provided to occupational injuries victims if they meet the conditions. This insurance is a system designed to prove compensation for medical expenses and livelihood support.
- However, meeting the eligibility criteria for insurance coverage can be quite challenging. With various efforts at the national level, the number of insurance applications has increased, and approval rates have improved. But, Some injured workers still do not receive insurance benefits.
- •We need to examine their health status and economic conditions based on their eligibility for workers' compensation insurance and explore areas for improvement in the system.

## **PURPOSE**

- The purpose of this study is to identify the extent of insurance benefits received by occupational injuries victims and to examine the difference in their medical expenses and the rate of Catastrophic Health Expenditure based on eligibility for workers' compensation insurance.
- The study aims to provide empirical support for crafting policies that enhance occupational injury prevention and compensation system

# METHODS

- ► Analysis Data: Using 'Korea Health Panel(KHP)' annual integrated data in 2014-2018(Using integrated 5-year panel data)
- ▶ Study Target: Study target included workplace accident victims who used medical services(emergency/inpatient/outpatient) at least four times a year, excluding those under 20.

#### **▶** Operational Definition

- Categorization of Study target(WCI Group VS NHIS Group)
  - (WCI Group) Individuals who received medical treatment under workers' compensation insurance
  - (NHIS Group) Those without WCI benefits, treated under National Health Insurance
  - (Catastrophic Health Expenditure, CHE) The financial burden on the household economy due to excessive medical costs compared to the capacity-to-pay

### RESULTS

- From the 5-year KHP dataset, there were a total of 829 occupational injuries victims, of whom 97(11.7%) were confirmed to have received workers' compensation benefits. The rest(88.3%) received medical expenses support through the National Health Insurance(NHIS).
- (Gender) WCI group: 85.57% male, NHIS group: 63.52% male, with a higher male ratio in the WCI group
- (Income level) WCI group: Over half in income quantile 2-3, NHIS group: Distributed in quantile 3-4, WCI group generally had lower income

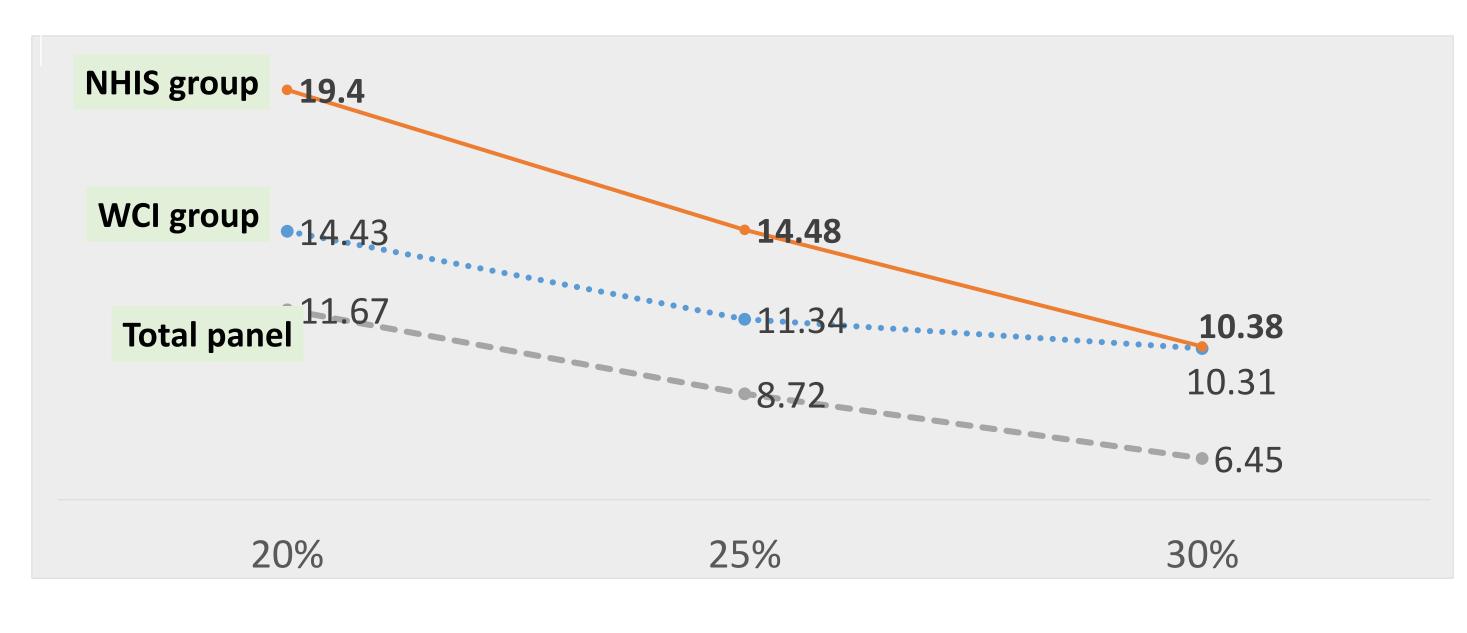
[Table 1] Comparison of medical expenditure between the two groups

	Annual average total medical expenses		Out-of-Pocket medical expenses		Ratio	
Categori	WCI	NHIS	WCI	NHIS		- 10
zation	GROUP(A)	GROUP(B)	GROUP(C)	GROUP(D)	C/A	D/B
	2,217	1,664	278	351	12.57	20.94
	(2,986)	(2,769)	(459)	(513)	12.57	20.54

- (Medical cost) The WCI group had an annual average total medical cost of approximately \$2,217(A), which was higher compared to the \$1,664(B) spent by the NHIS group.
- (Out-of-pocket money) The WCI group averaged around \$278(C), which was lower compared to the \$351(D) spent by the NHIS group
- (Ratio) Out-of-pocket as a percentage of total medical expenses: WCI group:
   12.57%, NHIS group: 20.94%

[Table 2] Comparison of medical expenditure between the two groups

Categorization		Thresholds				
		20%	25%	30%		
Ratio	WCI group	14.43	11.34	10.31		
	NHIS GROUP	19.40	14.48	10.38		
	Total panel	11.67	8.72	6.45		



- (Catastrophic Health Expenditure) At the 20-30% threshold, the WCI group had a lower CHE rate compared to the NHIS group. For the WCI group, households at the 20% threshold level for their medical expenses relative to their ability to pay accounted for 14.41%
- The CHE incidence rate followed the order of 'NHIS > WCI > Total panel'

#### CONCLUSIONS

- The purpose of this study is to identify the extent of insurance benefits received by occupational injuries victims and to examine the difference in their medical expenses and the rate of Catastrophic Health Expenditure based on eligibility for workers' compensation insurance.
- It was observed that those who did not receive workers' compensation insurance had a higher burden of medical expenses
- This implies that individuals receiving Workers' compensation insurance have a lower medical expenses burden.
  - Workplace accident victims had much higher CHE rates than non-victims, highlighting the need for diverse support to alleviate their medical cost burden