



Excess Medical Expenses of Minor Injury Patients in Korean Auto Insurance and Policy Reform¹⁾

ABSTRACT

The proportion of excess medical expenses is estimated to be between 34.8% and 64.5% in Korean auto insurance's medical expenditures to treat minor injuries in 2019. The medical expenses of about 29.3% of accident victims with minor injuries were 3.7 times greater than those of the rest. We should i) establish guidelines for diagnosis and treatment procedures on minor injuries, ii) unify the fee schedules of NHI and auto insurance, iii) revise the non-fee schedule of Korean traditional medical treatments, and iv) improve insurance claims payment standard; to reduce excess medical expenses in auto insurance.

Excess medical expenses of minor injury patients in Korean auto insurance are estimated to be 646.8 billion KRW based on National Health Insurance (NHI) treatment duration and 348.4 billion KRW based on auto insurance treatment duration. Those are equivalent to be 17 to 31 thousand KRW in auto insurance premium per car. This result is similar to Financial Services Commission's estimates: 540 billion KRW and 20 to 30 thousand KRW. In line with the literature, we quantified the excess expenses in auto insurance with false claims and cost build-up.²⁾ We measured false claims with bodily injury liability claim rate – the claim frequency ratio of bodily injury to property damage – and cost build-up with medical expenses per victim injured in car accidents. We estimated the size of false

1) This report is a collaborated work with the Korea Insurance Development Institute's Automobile Insurance Statistics Team.

2) False claims are claims made when no injury from an accident and cost build-up is to get more than the appropriate medical treatment.



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claims and cost build-up by comparing the claim rates and medical costs per victim over 17 cities and provinces.

Estimation results showed that i) false claims accounted for 11.1% of medical costs for minor injuries (levels 12 and 14 triage) and ii) cost build-up accounted for 23.7% and 53.5% of those costs based on auto insurance treatment duration and NHI treatment duration, respectively. The social cost resulting from the difference in treatment durations between NHI and auto insurance is about 30% (about 300 billion KRW) of minor injury medical expenses. Kim(2005) showed that if NHI standards applied to auto insurance medical costs review, auto insurance medical expenses would decrease by 19.7% in 2003.³⁾

〈Table 1〉 Excess Medical Expenses of Minor Injury Patients(2019)

(unit: hundred million KRW, %p, KRW)

False Claims Ⓐ	Cost Build-up Ⓑ		Excess Medical Expenses Ⓐ+Ⓑ	The Effect of Excess Medical Expenses on		
				Loss Ratio(%p)		Premiums per Unit
				Person	Policy	
1,115 (11.1%) ¹⁾	Based on Treatment Duration for Auto Insurance	2,368 (23.7%)	3,484 (34.8%)	6.9	2.5	16,800 (2.4%) ²⁾
	Based on Treatment Duration for NHI	5,353 (53.5%)	6,468 (64.5%)	12.9	4.6	31,200 (4.4%) ²⁾

Note: 1) Parentheses are the ratio of each item compared to the medical expenses for patients with levels 12 and 14 triage (about 1 trillion KRW).

2) The ratio of each item compared to the average insurance premium per unit (approximately 710 thousand KRW)

3) Since excess medical expenses affect compensation, such as settlement payments, the total social cost may be higher than the estimate.

The excess expenses group received Korean traditional medical treatments, which are often non-fee schedule treatments, more frequently than the non-excess expenses group. The settlement practice and medical benefits scheme in auto insurance may have led to the difference between the two groups. First, settlement

3) Kim(2005. 3. 2), The Necessity and Effect of Unification of Review on National Medical Expense, Legislative Public Hearing for Unification of Review on National Medical Expense



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amounts such as future medical expenses increase in medical costs. Second, medical expenses have no restrictions on the type of medical institution and treatment duration. The estimation result suggested that the medical fee schedule, the settlement practice, and the medical benefits scheme are the key factors in the excess medical expenses of minor injury patients in auto insurance.

〈Table 2〉 The Medical Consumption of the Excess Medical Expenses Group

Category		the Non-Excess Expenses Group Ⓐ	the Excess Expenses Group Ⓑ	Ⓑ/Ⓐ
Proportion of Patients (%)		70.7	29.3	-
Medical Expenses per Accident Victim	(1,000 KRW/person)	359	1,333	3.7
Treatment Duration	(Days/person)	5.6	17.2	3.1
Medical Expenses per Day	(1,000 KRW/day)	64	78	1.2
Hospitalization Rates	(%)	22.6	42.7	1.9
Korean Traditional Medicine Utilization Rate	(%)	40.5	84.5	2.1
General Hospital Utilization Rate	(%)	15.4	21.7	1.4
Long-term Outpatient Rate	(%)	4.7	32.1	6.8

Therefore, we should i) integrate the fee schedules of NHI and auto insurance, ii) adjust the non-fee schedule scheme of Korean traditional medicine treatments, and iii) improve the institutional practices in medical provision; to reduce excess medical expenses in auto insurance. And in the long run, we need to establish appropriate claim payment practices in line with minor injury severity.⁴⁾

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4) Regarding regulations improvement, refer to Jeon, Yang, and Kim(2020), *Review on Korea Auto Insurance Bodily Injury Liability Focusing on Minor Injury*, 2020-11, Korea Insurance Research Institute