

The Claim State of Dental Institutions for Payment from the NHIC

Bo- Kyoung Oh¹, Eun-Mi Yoo¹, Min-Young Kim², Hye-Sook Choi³

¹Professor, Shingu University, ²Professor, Howon University, Dept. of Dental Hygiene,

³Professor, Kyungdong University, Dept. of Dental Hygiene, Korea

Abstract

Background/Objectives: This study was performed to identify the causes that affect care benefits expense claim work of dental health insurance to provide basic data on efficient dental health insurance claim.

Method/Statistical Analysis: The study was conducted in the survey of Korean dental medical institution workers. The chi-square test was conducted to analyse the difference according to the health insurance claim method and the difference in health insurance reception result. A logistic regression analysis was conducted to verify the factors affecting the charge of health insurance claims.

Findings: Compared to the case of the absence of a dental hygienist, in case of 2 people, the probability of being in charge of a claim increased by 8.275 times ($p = .001$), and in case that the number of dental hygienists is 3 people or more, the probability of being in charge of a claim increased by 5.524 times ($p = .005$). Compared to the case of 1-4 employees, in case of more than 10 employees or more, the probability of being in charge of a claim is reduced by 0.119 times ($p = .002$). In the work experience, the probability of being in charge of a claim in case of more than 5 years and less than 10 years was 1.505 times higher than in case of less than 5 years ($p = .001$), and that of the case of more than 10 years was 6.440 times higher ($p < .001$).

Improvements/Applications: The introduction of a qualification system for the dental health insurance claim professional can reduce the burden on insurance claims by dental institutions.

Keywords: Claim status, Dental institution, Health insurance, National Health Insurance, Korea.

Introduction

Health insurance system is a social security system that prevents an excessive burden on households due to disease or injury and ensures that appropriate medical services are provided and the people ordinarily pay an insurance fee, and the National Health Insurance Service that is the insurer manages and operates them and provides insurance benefits if needed [1]. The health

insurance system adopts a third-party payment system where the medical provider does not request the full cost of medical treatment to the medical consumer but request it to Health Insurance Review and Assessment Service. For the payment method for medical expense, both Fee-for-service that is to pay a medical fee by setting a price for each medical treatment provided by a medical provider and case-payment that is a system that bears a predetermined amount of medical expenses for some disease groups such as payment implants and payment dentures have been applied [2].

Corresponding Author:

Hye-Sook Choi

Professor, Kyungdong University, Dept. of Dental Hygiene, Korea

e-mail: chs@kduniv.ac.kr

In Dental Health Insurance, with the start of tooth sealant in 2009, the attention and knowledge on the criteria for calculating care benefits expense are required according to that the insurance coverage of resin dentures, partial dentures, metal dentures, scaling, dental

implants, etc. has been expanded and the importance of knowledge about the criteria for calculating care benefits of dental insurance claimants has been reported [3,4]. The expansion of insurance coverage in dental health insurance has an effect on reducing the consumer's burden on medical use, which leads to an increase in medical consumption and it has a positive influence on dental management [5].

Although the importance of accurate claims in insurance claims by medical institutions has been emphasized through various studies [3,5-7] related to the claim actual status and knowledge level for care benefits expense of claim professional workforce, the error in application continues to occur due to the unskilled knowledge of the work related to the health insurance claim. Dental hygienists' understanding about the change of system according to expand the insurance coverage of dental health insurance and their accurate calculations regarding insurance claim affect the competitiveness enhancement of dental management and in a broad sense, the stabilization of insurance finances [8]. As the work importance of dental hygienists in charge of insurance claims is rising with the increase of the use of medical services due to the expansion of insurance coverage, alternatives on the provider side will be necessary for the quality of medical service and the efficient management of insurance claim work. Therefore, this study was performed to identify the causes that affect care benefits expense claim work of dental health insurance to provide basic data on an alternative for continuous and efficient dental health insurance claim professional workforce management.

Method

The study was conducted for 2 months from July to August 2015 in the survey of Korean dental medical institution workers. A total of 400 questionnaires were distributed and 333 questionnaires (83.3%) except for 67 questionnaires which had insufficient responses were analyzed. The questionnaires, which had a total of 23 questions, consisted of 8 general questions and 13 questions for the actual status of the dental health insurance claim. For the survey, the questionnaire was revised and supplemented after a preliminary survey with 20 questionnaires.

Statistical analysis was performed using SPSS WIN 21.0 program. The frequency and percentage of the subject's sociodemographic characteristics, the characteristics of medical institutions and the actual status of dental health insurance claims were calculated, and a chi-square test was conducted to analyze the difference according to the health insurance claim method and the difference in health insurance reception result. A logistic regression analysis was conducted to verify the factors affecting the charge of health insurance claims. The statistical significance level was set to .05.

Result and Discussion

The general characteristics of the study subjects are shown in Table 1. The occupation was dental hygienists 82.9% and nursing assistants 10.8%. The age was 59.4% under 30 years old, 28.2% under 30 - 40 years old. The work experience was 39.3% for less than 5 years, 31.5% for less than 5 ~ 10 years. The number of employees was 31.2% under 5 people, 42.6% under 5-10 people.

Table 1. General characteristics of the study subjects

Variables		N	%
Working area	Seoul	121	36.3
	Incheon/Gyeonggi-do	91	27.3
	Daejeon/Chungcheong-do	106	31.8
	Other	15	4.5
Occupation	Dental doctors	7	2.1
	Dental hygienists	276	82.9
	Nursing assistants	36	10.8
	other	14	4.2
Age	≤ 29	198	59.4
	30-39	94	28.2
	≥ 40	41	12.3
Work experience	≤ 4	131	39.3
	5-9	105	31.5
	≥ 10	97	29.1
Number of employees	≤ 4	104	31.2
	5-9	142	42.6
	≥ 10	83	26.1
Claim method	Exclusive claim	265	79.6
	Agency claim	68	20.4
Monthly claim amount	≤ 499	109	32.7
	500-899	115	34.5
	≥ 900	109	32.7

Table 2. Health insurance claim method according to the characteristics of medical institution

		Claim Method		P
		Exclusive Claim	Agency Claim	
Number of employees	≤4	72(69.2)	32(30.8)	.006
	5~9	118(83.1)	24(16.9)	
	≥10	75(86.2)	12(13.8)	
Number of Dental hygienists	None	5(18.5)	22(81.5)	.000
	1	33(63.5)	19(36.5)	
	2	32(78.0)	9(22.0)	
	≥3	195(91.5)	18(8.5)	
Monthly claim amount	≤ 499	74(67.9)	35(32.1)	.000
	500-899	90(78.3)	25(21.7)	
	≥900	101(92.7)	8(7.3)	
Total		265(79.6)	68(20.4)	

Table 2 shows that the result of analyzing the difference in the health insurance claim method. After dividing the health insurance claims into two groups, Exclusive claim and agency claim, as a result of analyzing the difference according to the number of claims, the number of hospital workforce and the number of dental hygienists, all three items were statistically significant.

Table 3. Health insurance claim reception result according to differences in health insurance claims

Variables		Claim Method		P
		Exclusive Claim	Agency Claim	
Field of cuts	Oral surgery	17(8.6)	4(8.3)	.921
	Conservation/Restoration	21(10.6)	7(14.6)	
	Endodontic treatment	20(10.1)	5(10.4)	
	periodontal treatment	127(64.1)	30(62.5)	
	general practice	13(6.6)	2(4.2)	
Itmes of cuts	Examination fee	27(12.7)	4(10.8)	.708
	Performance fee	159(75.0)	26(70.3)	
	Prescription fee	13(6.1)	4(10.8)	
	Material fee	13(6.1)	3(8.1)	
Main causes for cuts	Do not know the evaluation principle	37(15.0)	9(13.8)	<.001
	Because the chart contents according to the treatment do not fit the evaluation principle	85(34.6)	14(21.5)	
	Lack of program skills	10(4.1)	1(1.5)	
	The lack of evaluation criteria and the relevant latest information'	87(35.4)	15(23.1)	
	etc	27(11.0)	26(40.0)	
Improvements	Securing claim workforce and time	86(36.8)	15(23.4)	<.001
	Facility equipment and program	15(6.4)	2(3.1)	
	Simplification of claim and administrative procedures	44(18.8)	23(35.9)	
	Education to enhance employees' skills	88(37.6)	19(29.7)	
	etc	1(0.4)	5(7.8)	
Total		234(100.0)	64(100.0)	

Table 3 shows that the results, as a result of analyzing the cuts field, cuts items, the main causes of cuts, and claims improvement according to differences in health

insurance claims method, it was analyzed that there was a statistically significant difference in the main causes of cuts and claims improvement.

A multivariate logistic regression analysis was conducted to analyze factors affecting the charge of claim work. (Table 4.) The status of the responsibility of health insurance claim work was statistically significant in the number of dental hygienists (2, 3 people or more), the number of employees (10 people or more), the claims amount (more than 9 million won), and the work experience (more than 5 years and less than 10 years, more than 10 years). Compared to the case of the absence of a dental hygienist, in case of 2 people, the probability of being in charge of a claim increased by 8.275 times ($p = .001$). In the work experience, the probability of being in charge of a claim in case of more than 5 years and less than 10 years was 1.505 times higher than in case of less than 5 years ($p = .001$), and that of the case of more than 10 years was 6.440 times higher ($p < .001$).

Table 4. Factors affecting the charge of claim work

Variables		OR(95% CI)	P
Number of Dental hygienists	None	Reference	.002
	1	2.17(0.67-7.09)	.198
	2	8.28(2.39-28.67)	.001
	≥3	5.52(1.70-17.99)	.005
Number of employees	≤4	Reference	.005
	5-9	0.72(0.37-1.39)	.329
	≥10	0.28(0.12-0.63)	.002
Age	≤29	Reference	.147
	30-39	0.53(0.22-1.28)	.156
	≥40	1.00(0.31-3.23)	.996
Monthly claim amount	≤499	Reference	.057
	500-899	1.84(0.97-3.48)	.062
	≥900	2.22(1.13-4.36)	.021
Work experience	≤4	Reference	.000
	5-9	2.77(1.51-5.11)	.001
	≥10	6.44(3.33-12.45)	.000

Discussion

As hospital management deteriorated recently, the number of hospitals which rely on health insurance claims rather than non-payment medical treatment or surgery increased [9]. As the coverage of insurance benefits gradually increases by expanding the insurance coverage of tooth sealant, which was previously a non-payment treatment item, and applying the dentures, one-time tooth scaling a year, and dental implants of the elderly as insurance benefits, health insurance treatment is recognized as a factor that can enhance the competitiveness of dental management [10].

Whether or not the health insurance system has been satisfactory and there have been no financial problems should be reviewed and whether or not the finances were reasonably managed should also be reviewed [11]. Additionally, as there are also a number of difficulties related with health insurance in dental institutions [12], to compensate for this, institutional review should be made to ensure that health insurance claim work can be performed independently and professionally [13], by recognizing the need for professional claimants with whom the effectiveness of treatment can be increased in the clinic, and by cultivating medical treatment claim professionals who are dedicated to health insurance claims to enhance the quality of medical services through coordinating the workforce [14].

The study of Oh [15] that the reason for making the agency claim is due to the time loss and complicated administrative procedures experienced when making the exclusive claim. As noted in the study of Kim and Jung [13], it is necessary to cultivate medical treatment claim professionals who are dedicated to health insurance claim works in order to enhance the quality of medical services by recognizing the need for professional claimants to increase the efficiency of medical practitioners in the clinic, and by performing efficiently and effectively the medical insurance claim works which are currently requested at medical institutions, and reducing medical practitioners' treatment works.

Moreover, it is also needed to provide special expertise to dental hygienists because there are many views that dental hygienists are the most suitable people for the professional management of health insurance claim work and self-examination work in dental care institutions [16].

In terms of the claims improvement, in the Exclusive claim, 'education to enhance employees' skills' 37.6% and 'securing claim personnel and time' 23.4% were high. In the agency claim, 'simplification of claim and administrative procedures' 35.9%, and 'education to enhance employees' skills' 29.7% were shown high. This is the same result as the study of Yoo [4] that insurance claims were not made properly due to lack of time, workforce and lack of knowledge of health insurance in dental institutions. In the study of Park [17], it was described that dental clinics emphasized the need for systematic education of not only the claimants but also employees with explaining the difficulties of claim

works and health insurance-related education would help them execute their works.

As a dental health insurance claim work is not just a job, but establishes a credible trust with patients and provides medical services, and further affects hospital management performance, need for intensive insurance claim education is required^[17]. Thus, as dental hygienists are in a position to calculate accurately the medical expenses, the role of dental hygienists is emphasized to prevent any possible revenue cuts, and with awareness of the insurance fee system of dental hygienist, to claim promptly the medical services provided to patients by the hospital without errors and omissions^[18].

Therefore, as suggested in the study of Ahn^[19], it is necessary to consider being able to exert their abilities after employment in the hospital by selecting professional dental hygienists for dental insurance claims with introducing the dental health insurance claim professional qualification system as a national qualification system. The introduction of the qualification system can reduce the burden on insurance claims by dental institutions, and it is considered that the dental hygienists can exert their abilities to enter into the Health Insurance Review and Assessment Service later after building their clinical career as professional dental hygienists for dental insurance claims.

Conclusion

The introduction of a qualification system for the dental health insurance claim professional can reduce the burden on insurance claims by dental institutions. Furthermore, it is considered that the efficiency of claim work will be inclined if professional dental hygienists are actively made to work in the field of dental insurance claims. Therefore, a foundation for cultivating claim professionals should be established, and it is believed that, for this purpose, it is necessary to introduce a private-centered claim professional qualification system as a national qualification system.

Ethical Clearance: Not required

Source of Funding: Self

Conflict of Interest: Nil

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