Factors Related to Dissatisfaction with the National Health Insurance among Primary Care Physicians in Taiwan

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Background: Few studies were found that evaluated dissatisfaction with the National Health Insurance (NHI) by primary care physicians in Taiwan. Therefore, the purpose of this study was to identify factors related to dissatisfaction with the NHI among primary care physicians.

Methods: A structured questionnaire was developed through a literature review, a panel discussion, and 5 focus group interviews. In total, 9336 primary care physicians were surveyed. A logistic regression analysis was employed to identify factors related to dissatisfaction with the NHI by primary care physicians.

Results: There were 1822 surveys returned, yielding a 19.5% response rate. They showed that 5.7% of respondents were very dissatisfied and 22.3% were dissatisfied with the current medical environment under the NHI. The dissatisfaction of primary care physicians was significantly related to age (OR = 1.029, $p < 0.05$) and dissatisfaction with the following aspects: malpractice claims (OR = 1.744, $p < 0.001$), complexity of medical claims (OR = 1.454, $p < 0.01$), excessive work hours (OR = 1.790, $p < 0.001$), decreased income (OR = 2.812, $p < 0.001$), difficulty in finding nurses (OR = 1.379, $p < 0.05$), and the separation of dispensing medicine from medical practice (OR = 1.389, $p < 0.05$).

Conclusions: These results can provide valuable information to help policy makers identify areas for improvement and intervention in order to reduce levels of dissatisfaction of primary care physicians under the NHI.

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Key words: dissatisfaction, primary care physicians, National Health Insurance.

According to data released by the Chinese Primary Care Association,[1] 30% of physicians in the practice of direct care of patients were involved in primary care in 2001, compared to 38.2% in 1990. The annual growth rate for the number of total outpatient visits in primary care clinics has also dropped from 5.49% in 1998 to 2.32% in 1999, to -3.92% in 2000, especially after implementation of the National Health Insurance (NHI) program in 1995. The rate of outpatient visits was expected to have dropped even further in the first quarter of 2001. For monetary estimation, the annual growth rate for the total amount of medical claims for primary care decreased from 9.51% in 1998 to 3.89% in 1999, to -3.85% in 2000, and to -4.48% in the first quarter of 2001. As a result, implementation

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of the NHI has not only expedited shrinkage of primary care, but has also led to reduced incomes for primary care physicians.[2,3]

Based on the US experience under managed care, physician dissatisfaction may lead to increased physician turnover and early retirement, poorer patient adherence, declining patient satisfaction, decreased continuity of care for patients, and increased costs to the medical system.[4-8] Similarly to managed care organizations as dominant players in US health market, the Bureau of National Health Insurance, as a monopsonist, exerts its overwhelming purchasing power to limit physicians' autonomy and judgments in medical practice. Studies have also identified that physician dissatisfaction is related to excessive workloads and time pressures, limited personal time, excessive paperwork, insufficient medical facilities, isolation due to specialization, a lack of leisure activities, low incomes, personal limitations in knowledge or ability, and a lack of professional promotions.[7,9-13] Haas also concluded that age, gender, income, practice in an urban setting, and work hours are related to the dissatisfaction of physicians.[14]

However, most of the factors fostering dissatisfaction described above are based on US experiences. They cannot fully account for the dissatisfaction of primary care physicians in Taiwan due to differences in medical and cultural practices. In addition, it may be an oversimplification to consider factors related to physicians' dissatisfaction without reference to the possible effects of the NHI on primary care. Therefore, it is reasonable to project that dissatisfaction among primary care physicians not only may affect the quality of patient care, but also may influence the supply of primary care physicians in Taiwan. Finding ways to overcome the dissatisfaction among primary care physicians has become an imperative issue for policy makers to stop the rapid shrinkage of primary care in Taiwan. However, few studies could be found related to primary care in Taiwan and dissatisfaction among primary care physicians after implementation of the NHI. Therefore, the purpose of this study was to identify factors related to dissatisfaction among primary care physicians in Taiwan under the NHI. Understanding the factors related to dissatisfaction with the NHI not only can reflect discomfort with changes and unmet expectations of primary care physicians, but also can indicate areas for improvement and intervention in primary care.

METHODS

This national survey study was conducted using a structured questionnaire to assess factors related to dissatisfaction among primary care physicians under the NHI system.

Study population

Subjects for this study were all primary care physicians in Taiwan. Sampled physicians were those who had registered as an active primary care physician with the Department of Health in 2001. In total, 9336 subjects, including 8846 physicians in private primary care clinics, and 490 physicians in public primary care clinics, were surveyed in this study. All human rights and confidentiality were protected.

Instrument

A structured questionnaire was developed by the research team through a literature review, a panel discussion, and 5 focus group interviews. The questionnaire consisted of 3 parts. The first part was comprised of overall satisfaction questions related to the NHI. Satisfaction level was measured on a 5-point Likert scale and ranged from very dissatisfied(1) to very satisfied.(5) The second part of the questionnaire consisted of 18 items related to dissatisfaction under the NIH by primary care physicians including(1) increased number of malpractice claims,(2) the process of purchasing medical equipment,(3) lack of leisure time,(4) lack of time for continuing education,(5) inadequate medical equipment or resources,(6) complexity of medical claims processes,(7) internal managerial problems in clinics,(8) excessive working hours,(9) gangster blackmail,(10) decreased incomes,(11) difficulty with patient referrals,(12) tax claims,(13) difficulties in finding nurses,(14) instability of NHI regulations,(15) the separation of dispensing medicine from medical practice,(16) labor standard laws,(17) standards for group practice, and(18) lack of supportive systems. Respondents were asked to answer whether or not they were dissatisfied with these 18 items.

Finally, demographics such as gender, age, marital status, certification of specialty, years of medical practice, and years of practice in primary care were

included. Instructions were provided at the beginning of the questionnaire indicating that a respondent was to indicate whether or not he/she was dissatisfied with each item under the NHI. To test for content validity, 8 experts were invited to examine questions related to appropriateness, importance, and clarity of each item of the dissatisfaction questionnaire. The content validity index (CVI) was used and resulted in a value of greater than 0.8. Some words or sentences were revised in accordance with the experts' suggestions.

Data collection processes and analysis

Data were collected from October 2001 to December 2001 from all eligible primary care physicians. Primary care physicians' names and address were obtained from the Department of Health in 2001. A stamped, self-addressed return envelope was mailed with the questionnaire to all primary care physicians.

Statistical analyses were conducted using the Statistical Package for the Social Sciences (SPSS 10.0 for Windows, 1997, SPSS, Chicago, IL). All variables were analyzed using descriptive measures such as frequency, percentage, mean, and standard deviation. A logistic regression analysis was employed to identify the statistically significant factors related to dissatisfaction among primary care physicians under the NHI. The independent variables included the 18 above-described items as well as the demographics of the primary care physicians such as age, gender, marital status, clinic location, certification of specialty, years of experience in medical practice, and years of experience in primary care practice. Marital status was categorized as married, unmarried, widowed, separated, and remarried. Clinical location was divided into northern (Taipei City, Taipei County, Taoyuan County, Ilan County, and Hsinchu County), central (Miaoli County, Taichung County, Changhua County, Nantou County, and Yunlin County), southern (Chiayi County, Tainan County, Kaohsiung County, Kaohsiung City, and Pingtung County), and eastern (Hualien County and Taitung County) Taiwan. The dependent variable was determined based on whether or not a primary care physician was dissatisfied under the NHI (1 = dissatisfaction, 0 = others). Primary care physicians who answered "very dissatisfied" and "dissatisfied" were coded as 1 and those who answered "very satisfied", "satisfied", and "neither dissatisfied nor satisfied" were recorded as 0. In the case of categorically independent variables, dummy variables were created to model the effects of the different levels of a qualitative independent variable. All regression coefficients were considered significant at $p<0.05$. In addition, a "goodness-of-fit test" was performed to examine whether or not there was a difference between the characteristics of participants and the total primary care physicians population.

RESULTS

In total, 1822 questionnaires were returned after 2 telephone follow-up calls over a 3-week period which yielded a 19.5% response rate. The demographic characteristics of the respondents were similar to those of all physicians who registered as active primary care physicians at the Department of Health in 2001 with regard to age, gender, and clinic location (see Table 1). Respondents' age ranged from 25 to 88 years, with a mean age of 47.66 years (the mean age of the total population was 46.65 years) and a standard deviation of 10.50 years (see Table 2). Not surprisingly, males (94.3%) represented the majority of primary care physicians in Taiwan (the male percentage of the total population was 93.18%). With regard to marital status, the overwhelming majority of respondents (96.3%) were in the "mar-

Table 1. Characteristics of Respondents and Population

Variable	Respondents			Population		
	No.	%	Mean	No.	%	Mean
Age (year)	**1740**	**100.0**	**47.66**	**9336**	**100.0**	**46.65**
Under 30	7	0.4		74	0.8	
31-40	469	27.0		2558	27.4	
41-50	740	42.5		3781	40.5	
51-60	325	18.7		1643	17.6	
Over 61	199	11.4		1280	13.7	
Location	**1758**	**100.0**		**9336**	**100.0**	
Northern	704	40.0		3762	40.3	
Central	462	26.3		2257	24.2	
Southern	524	29.8		2898	31.0	
Eastern	68	3.9		419	4.5	
Gender	**1794**	**100.0**		**9336**	**100.0**	
Male	1691	94.3		8701	93.2	
Female	103	5.7		635	6.8	

Note: The above variables were examined by the goodness-of-fit test and showed no significant differences.

Table 2. Demographic Information of Primary Care Physicians

Variable	No. (%)	Mean	S.D.	Minimum	Maximum
Age (year)	**1740**	**47.66**	**10.50**	**25**	**88**
Marital status	**1794**				
Married	1727 (96.3)				
Unmarried	28 (1.6)				
Widowed	15 (0.8)				
Separated	18 (1.0)				
Remarried	6 (0.3)				
Certification of Specialty	**1785**				
Yes	1634 (91.5)				
No	151 (8.5)				
Years of medical practice experience	**1792**	**19.59**	**10.36**	**1**	**61**
Years of practice experience in primary care	**1751**	**11.65**	**10.02**	**< 1**	**58**

ried" category. Only 6 of 1794 respondents had remarried. As to clinic location, 40% of respondents were currently practicing in clinics located in northern Taiwan, 26.3% in central Taiwan, 29.8% in southern Taiwan, and only 3.9% in eastern Taiwan.

Of the sampled physicians, 91.5% had specialist certificates. The mean years of medical practice were 19.59, and the minimum and maximum years were 1 and 61, respectively. Years of practice in primary care ranged between < 1 and 58, with a mean of 11.65 years and a standard deviation of 10.02 years.

Overall satisfaction level of primary care physicians under the NHI

Of the total sample, 5.7% (N = 101) of respondents were very dissatisfied with, 22.3% (N = 397) were dissatisfied with, 16.5% (N = 294) were satisfied with, and only 1.9% (N = 32) were very satisfied with the current medical environment under the NHI. In other words, 28% (N = 498) of respondents were very dissatisfied or dissatisfied with the current medical environment. Only 18.4% (N = 326) of respondents were satisfied or very satisfied with the current medical environment. The majority of respondents (53.6%) rated themselves as "neither dissatisfied nor satisfied" with the current medical environment.

Items considered unsatisfactory by primary care physicians

The top 5 items which primary care physicians felt the most dissatisfied with under the NHI were decreased income (59%), instability in NHI regulations (56.1%), excessive working hours (52.8%), no leisure time (46.9%), and complicated medical claims under the NHI (44.3%) (Table 3). On the other hand, the bottom 5 items which primary care physicians felt least satisfied with were purchases of medical equipment (10.7%), gangster blackmail (10.9%), internal management in clinics (13.9%), inadequate medical equipment (14.2%), and difficulties in transferring or referring patients (14.2%).

Logistic analysis

The logistic regression analysis revealed that the dissatisfaction level of primary care physicians was significantly positively related to age (OR = 1.029; 95% CI 1.002-1.058; $p < 0.05$) and dissatisfaction with the items of the number of malpractice claims (OR = 1.744; 95% CI 1.307-2.326; $p < 0.001$), medical claims under the NHI (OR = 1.454; 95% CI 1.128-1.876; $p < 0.01$), excessive work hours (OR = 1.790; 95% CI 1.327-2.413; $p < 0.001$), decreased incomes (OR = 2.812; 95% CI 2.150-3.679; $p < 0.001$), difficulties in finding nurses (OR = 1.379; 95% CI 1.019-1.867; $p < 0.05$), and the separation of dispensing medicine from medical practice (OR = 1.389; 95% CI 1.051-1.835; $p < 0.05$) (see Table 4). As a result, primary care physicians who were older and unhappy about the increased number of malpractice claims, complicated medical claims under the NHI, excessive working hours, decreased income, difficulty in finding nurses, and the separation of dispensing medicine from medical practice were more likely to be dissatisfied under the NHI.

Table 3. Dissatisfactory Items for Primary Care Physicians (N=1822)

Variables	No.	%
Dissatisfied with increased malpractice claims	525	29.3
Dissatisfied with purchase of medical equipment	192	10.7
Dissatisfied with lack of leisure time	840	46.9
Dissatisfied with lack of time for continuing education	562	31.4
Dissatisfied with inadequate medical equipment	254	14.2
Dissatisfied with complicated medical claims under the NHI	794	44.3
Dissatisfied with internal management in clinics	249	13.9
Dissatisfied with excessive working hours	946	52.8
Dissatisfied with gangster blackmail	195	10.9
Dissatisfied with decreased income	1058	59.0
Dissatisfied with difficulty in transferring or referring patients	254	14.2
Dissatisfied with tax claims	566	31.6
Dissatisfied with difficulties in finding nurses	337	18.8
Dissatisfied with instability in NHI regulations	1006	56.1
Dissatisfied with the separation of dispensing medicine from medical practice	440	24.6
Dissatisfied with labor standard laws	478	26.7
Dissatisfied with establishment standards for group practice	372	20.8
Dissatisfied with regulations for supportive physicians	433	24.2

Note: "No." represents the number of primary care physicians who were dissatisfied with an item; NHI: National Health Insurance.

However, paradoxically, the level of dissatisfaction of primary care physicians was significantly negatively related to dissatisfaction with tax claims (OR = 0.681; 95% CI 0.514-0.901; $p < 0.01$). This result may suggest that primary care physicians who were dissatisfied with tax claims tended to be more satisfied under the NHI. Variables including gender, marital status, clinic location, years of medical practice, and years of practice in primary care were not significantly related to the level of dissatisfaction of primary care physicians under the NHI.

DISCUSSION

The response rate was only 19.5% in this study even though the research team expended much effort to increase the result. The response rate was still low, but it was similar to that of Lin and Chiang's study,[15] which surveyed 7500 physicians and yielded only a 21.6% response rate. It could be concluded that the response rate is reasonable for a national survey study. However, although the respondents were similar to those of physicians who registered as active primary care physicians at the Department of Health in 2001 with regard to age, gender, and clinic location, other demographic characteristics such as income and specialty of the respondents and population were not available in this study. Therefore, there is no means to demonstrate that the respondents were similar to the entire population regarding all demographic characteristics, so the findings of this study should be used very conservatively to generalize to the entire population.

The findings indicate that age, increased malpractice claims, increasingly complicated medical claims, excessive working hours, decreased income, tax claims, difficulties in finding nurses, and the separation of dispensing medicine from medical practice were important factors identified with which primary care physicians were dissatisfied under the NHI.

The results also indicate that age is related to the dissatisfaction of primary care physicians under the current medical environment of the NHI. However, this finding was inconsistent with several previous findings concerning the relationships between physicians' satisfaction and age.[14,16,17] Previous studies showed that younger physicians had a greater tendency to be dissatisfied. The differences may be due to the fact that those studies were conducted in the US, and there are differences in the medical culture and practice between the US and Taiwan health care systems. In addition, the target populations in those

Table 4. Relationships between Satisfaction and Factors among Primary Care Physicians

Variable	b	std. error	OR	95% C.I.	*p*
Dissatisfied with increased number of malpractice claims (no=0)	0.556	0.147	1.74	(1.31 - 2.33)	0.000***
Dissatisfied with purchase of medical equipment (no=0)	0.296	0.202	1.34	(0.90 - 2.00)	0.143
Dissatisfied with lack of leisure time (no=0)	0.299	0.154	1.35	(1.00 - 1.82)	0.052
Dissatisfied with lack of time for continuing education (no=0)	0.262	0.147	1.30	(0.97 - 1.73)	0.075
Dissatisfied with inadequate medical equipment (no=0)	-0.041	0.183	0.96	(0.67 - 1.37)	0.822
Dissatisfied with medical claims under the NHI (no=0)	0.375	0.13	1.45	(1.13 - 1.88)	0.004**
Dissatisfied with management in clinic (no=0)	0.058	0.182	1.06	(0.74 - 1.52)	0.750
Dissatisfied with excessive work hours (no=0)	0.582	0.153	1.79	(1.33 - 2.41)	0.000***
Dissatisfied with gangster blackmail (no=0)	0.236	0.202	1.27	(0.85 - 1.88)	0.243
Dissatisfied with decreased income (no=0)	1.034	0.137	2.81	(2.15 - 3.68)	0.000***
Dissatisfied with difficulties in transferring or referring patients (no=0)	0.088	0.173	1.09	(0.78 - 1.53)	0.613
Dissatisfied with tax claims (no=0)	-0.385	0.143	0.68	(0.51 - 0.90)	0.007**
Dissatisfied with difficulties in finding nurses (no=0)	0.321	0.155	1.38	(1.02 - 1.87)	0.038*
Dissatisfied with instability in NHI regulations (no=0)	0.149	0.13	1.16	(0.90 - 1.50)	0.253
Dissatisfied with the separation of dispensing medicine from medical practice (no=0)	0.329	0.142	1.39	(1.05 - 1.84)	0.021*
Dissatisfied with labor standard laws (no=0)	0.112	0.142	1.12	(0.85 - 1.48)	0.428
Dissatisfied with establishments for group practice (no=0)	0.063	0.154	1.07	(0.79 - 1.44)	0.684
Dissatisfied with regulations for supportive physicians (no=0)	-0.071	0.151	0.93	(0.69 - 1.25)	0.638
Age	0.029	0.014	1.03	(1.00 - 1.06)	0.039*
Gender (male=0)	-0.069	0.29	0.93	(0.53 - 1.65)	0.812
Marital status (unmarried=0)	-0.359	0.323	0.70	(0.37 - 1.32)	0.267
Specialist certificate (no=0)	0.011	0.236	1.01	(0.64 - 1.61)	0.962
Years of medical practiced experience	0.003	0.016	1.00	(0.97 - 1.04)	0.852
Years of practiced experience in primary care	0.01	0.011	1.01	(0.99 - 1.03)	0.334
Constant	-3.687	0.689	0.03		0.000***
N		1632			
Model $X^2(24)$		234.95	***		

* $p<0.05$; ** $p<0.01$; *** $p<0.001$.

preceding studies were focused on hospital-based physicians or physicians under managed care rather than primary care physicians. Therefore, findings based on the US experience might not fully explain the relationship between age and dissatisfaction of primary care physicians under the NHI in Taiwan.

A possible reason contributing to the positive relationship between age and dissatisfaction among primary care physicians in Taiwan could be the erosion of professional sovereignty. Most older primary care physicians experienced the "golden years" of primary care in Taiwan between 1970 and 1990.[2] During this period of time, the medical profession was the highest-paid occupation in society and exercised dominant control over health markets and medical organizations. Moreover, the profession turned its authority into social privilege, economic power, and political influence. The medical profession thus had an influential claim to authority. However, after implementation of the NHI system in 1995, most physicians were paid by whatever services they provided under the BNHI instead of by traditional out-of-pocket payments from patients. The physicians' authority in medicine has been threatened and challenged by the BNHI, which now controls the amount and rate of remuneration for physicians and the allocation of medical resources. Colby in 1997 stated that the loss of autonomy to corporations owned by others was probably the greatest fear of physicians.[18] Stoddard and his colleagues in 2001 also indicated that professional autonomy was a strong independent predictor of physician satisfaction.[19] Loss of control over clinical and related matters is reflected in physicians' dissatisfaction with the current health environ-

ment under the NHI.

Traditionally, primary care physicians would stay in their own clinics as long as possible to avoid losing any potential patients. Lin in 1999 concluded that the average primary care physician in Taiwan works 9.36 hours per day and 6.20 days per week.[2] The long working hours led to a shortage of time for primary care physicians to attend continuing education programs. Moreover, according to a study by Mawardi, physicians may be dissatisfied with their limited medical knowledge or abilities,[11] since the pace of growth in medical technology was faster than expected during the past 2 decades. Thus, primary care physicians in Taiwan have to absorb updated medical knowledge to stay competitive with hospital-based physicians in the healthcare market. In particular, the increasingly complicated procedures of medical claims under the NHI require physicians to receive continuing education so they can remain competent. However, the lack of time for continuing education was not significantly related to the level of dissatisfaction under the NHI in this study. Further investigation is needed in the future to understand the relationship between continuing education and dissatisfaction.

In this study, as many as 46.9% of respondents expressed dissatisfaction with their lack of leisure time. However, no statistically significant relationship was found between dissatisfaction of primary care physicians and dissatisfaction with the lack of leisure time in this study. This is inconsistent with the conclusion by Lee and Chou in 1991 who found that the lack of leisure time was an important factor related to the dissatisfaction of primary care physicians.[12]

Not surprisingly, this study revealed that dissatisfaction with decreased income was one of the most important factors predicting dissatisfaction among primary care physicians under the NHI. We found that 59% of respondents were dissatisfied with their decreased income. This finding is supported by 2 related studies.[12,16] The decreased income can be partly attributed to a reduction in the number of total outpatient visits for primary care clinics. For example, the growth rate in the number of total outpatient visits for primary care clinics was -3.91% in 2000, in contrast to a 4.16% gain for medical centers and a 2.84% gain for regional hospitals. Similarly, the growth rate of the total monetary amount of medical claims for primary care clinics was -3.94% in 2000, in contrast to a 5.82% gain for medical centers and a 2.53% gain for regional hospitals. Both of these contributed to the drop in physicians' incomes.

This study also found that dissatisfaction with increased medical malpractice claims was related to dissatisfaction among primary care physicians under the NHI. According to data released by the Department of Health, Taiwan, in 2000, the number of malpractice lawsuits increased 58.5% after the inception of the NHI in 1995. A possible explanation for the increase in the number of malpractice lawsuits is that people have progressively recognized the importance of protecting their own rights when facing an imbalanced relationship in medical knowledge with physicians. As a result of the widespread use of Web sites to search for medical knowledge, public trust in physicians has decreased accompanied by an increase in the number of malpractice lawsuits. Some other studies have also documented that malpractice lawsuits were related to physician dissatisfaction.[11,20]

Aside from the decreased trust in physicians, another possible explanation for the increase in the number of malpractice lawsuits is that primary care physicians do not practice much defensive medicine since the BNHI does not reimburse for that. Shi and Singh defined defensive medicine as excessive medical tests and procedures performed as a protection against malpractice lawsuits.[21] Further research is needed to explore the effects of increased medical malpractice claims on changes in physician behavior and incomes in Taiwan.

Physician dissatisfaction with the complicated procedures for medical claims under the NHI also had a statistically significant relationship with dissatisfaction among primary care physicians; 44.3% of respondents were dissatisfied with medical claims in the study. This reflects physician dissatisfaction with the increased administrative burden and unstable regulations under the NHI. One recent study of Stoddard and his colleagues in 2001 also indicated that physicians consider external regulations and paperwork as problems in medical practice.[19]

Exploring the factors related to dissatisfaction of primary care physicians not only can help policy makers understand differences between reality and expectations, but can also identify areas for improvement and intervention. In particular, almost 1/3 of

primary care physicians were reportedly dissatisfied with the current medical environment under the NHI. Primary care physician dissatisfaction may lead to increased physician turnover and early retirement which will contribute to the continued shrinkage of primary care. Therefore, in order to stop the continued erosion of primary care services, the Department of Health or the BNHI should encourage primary care physicians to join a group practice, which is characterized as the provision of health care services by 2 or more physicians who are formally organized as a legal entity. Particularly, primary care physicians have long working hours and are overloaded with paperwork in a solo practice. A group practice setting can provide primary care physicians with more leisure time, greater access to capital, more regular working hours, more time for continuing education, and more opportunities to employ a full-time person to deal with medical claims under the NHI compared to solo primary care practitioners. Moreover, further research is needed to include the possible effects of the implementation of a policy for a reasonable number of outpatients and a global budget system on dissatisfaction among primary care physicians.

Limitations

Because the data were obtained from a self-reporting survey by primary care physicians throughout Taiwan, some data may have been over- or under-reported. The extent of over-reporting and under-reporting was difficult to estimate, but could have resulted in overestimation or underestimation of the level of satisfaction of primary care physicians under the NHI. Additionally, as this study may be the first national survey study concerning dissatisfaction among primary care physicians under the NHI, comparison with other studies is not possible. Therefore, further study is needed to understand whether or not these primary care physicians' reports are valid.

Since this study was a cross-sectional national survey, it is difficult to understand the relationship between causes and effects of the dissatisfaction of primary care physicians. Therefore, a longitudinal study is also needed to clarify this relationship in the future. Additionally, the low response rate may be a natural limitation of a national survey study; thus, the findings of this study should be used very conservatively to generalize to the entire population.

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台灣基層執業醫師在全民健保體制下不滿意的因素探討

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背 景： 有關評估基層執業醫師在全民健保體制下不滿意程度的研究是非常少見的，因此本研究的目的是要確認在全民健保體制下基層執業醫師不滿意的因素。

方 法： 藉由文獻查證、座談會及舉辦五次的焦點團體來發展問卷。後對9336位基層執業醫師進行問卷調查，再使用邏輯式迴歸分析來確認在全民健保體制下影響基層執業醫師不滿意的因素。

結 果： 回收1822份問卷，回收率爲19.5%。其中5.7%及22.3%的基層執業醫師分別不滿意及非常不滿意在全民健保體制下的醫療環境。基層執業醫師不滿意的相關因素爲年齡 (OR = 1.029, $p < 0.05$)、醫療訴訟 (OR = 1.744, $p < 0.001$)、申報手續複雜 (OR = 1.454, $p < 0.01$)、過多的工作時間 (OR = 1.790, $p < 0.001$)、收入減少 (OR = 2.812, $p < 0.001$)、聘用護士有困難 (OR = 1.379, $p < 0.05$) 及醫藥分業 (OR = 1.389, $p < 0.05$)。

結 論： 本研究結果可提供政策制定者寶貴資料，藉以確認需要改善及修法的領域，以降低基層執業醫師的不滿意程度。

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關鍵字： 不滿意，基層執業醫師，全民健保。

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