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Opinions of Hospital Administrators toward the Prevalence of Patient Dumping in Taiwan

Herng-Ching Lin, PhD; Ming-Chin Yang¹, PhD; Chu-Chieh Chen¹, MHA; Chao-Hsiun Tang, PhD

Background: The purposes of this paper were to examine whether patient dumping has

occurred under the National Health Insurance and to explore hospital admin-

istrators' attitudes toward the practice of patient dumping in Taiwan.

Methods: The study subjects were administrators in general hospitals that were accred-

ited by the Taiwan Joint Commission on Hospital Accreditation as medical centers, regional hospitals, or district teaching hospitals in the years 2000 and 2001. A self-administered postal survey was conducted using a struc-

tured questionnaire mailed to 128 administrators in general hospitals.

Results: Of the respondents, 83 of 99 (83.8%) administrators perceived that patient

dumping did occur in their service areas to a certain degree regardless of their hospital location, hospital level, or hospital ownership. A total of 67 of 74 (90.5%) administrators who attempted to answer the question on the prevalence of patient dumping perceived that different percentages (mean=13.27%) of hospitals transferred patients solely on economic considerations in their service areas. In addition, this study found that no statistically significant relationships existed between the administrators' perceived percentage of emergency patients received by their hospitals and hospital characteristics. However, there was a statistically significant relationship between the perceived percentage of inpatients received and hospital level

(p = 0.007).

Conclusion: According to the results of this study, we concluded that patient dumping is a

serious and widespread problem in the healthcare industry in Taiwan. Patient dumping can jeopardize patient health and impair the financial integrity of receiving hospitals. Implementation of a case payment system may worsened

the situation in Taiwan.

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Key words: patient dumping, Taiwan, national health insurance.

The National Health Insurance (NHI) program was officially launched on March 1, 1995 in Taiwan. Notably, the NHI extended its enrollment rate from 54% to over 95% of the entire population

since the end of the inaugurate year (Bureau of the National Health Insurance, BNHI, 2002). However, the expedited expansion of coverage rates and increasing access to medical care have been accom-

From the School of Health Care Administration, Taipei Medical University, Taipei, Taiwan; 'Graduate Institute of Health Care Organization Administration, National Taiwan University, Taipei, Taiwan

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Address for reprints: Chao-Hsiun Tang, PhD, School of Health Care Administration, Taipei Medical University. 250, Wu-Hsing St., Taipei, Taiwan 110, R.O.C. Tel.: 886-2-27361661 ext. 3610; Fax: 886-2-23789788; E-mail: chtang@tmu.edu.tw

panied by a dramatic rise in medical expenses. In response to the impending financial crisis, the BNHI focused on cost containment strategies for the health supply side to implement a "diversified payment system" including global budgets, capitation payment, and a case payment system to stabilize the growth in medical expenditures. Under financial pressures from the BNHI, maintaining certain profit margins has caused some hospital administrators to become more business oriented. As a result, hospitals in Taiwan are driven to seek cost saving strategies for the delivery of medical care in order to stay competitive in the healthcare industry.

Based on the experiences in the United States, reductions in reimbursements or limitations in government funding for medical care can result in increasing numbers of patient transfers among hospitals.(1) The Public Citizen's Health Research Group confirmed that about 250,000 patients annually were transferred based on economic reasons rather than the patients' needs for medical care due to limitations in government funding during the 1980s in the United States.⁽²⁾ In addition, increased hospital competition, (3,4) elevated density of private for-profit hospitals, (5-7) implementation of the prospective payment system (PPS), (3,8-9) and high penetration of managed care were also important factors contributing to patient dumping.(1) Patient dumping not only has become a serious and widespread problem in the United States, but it has also had a detrimental impact on the financial situation of receiving hospitals as well as on the health of the patients. (10-13)

In Taiwan, Lin et al. indicated that not only did patient dumping exist, but that it also impaired the financial integrity of many public hospitals.(14) The study by Lin et al. suggested that the low cost per discharge in for-profit hospitals might have resulted in part from patient dumping.(15) In particular, the widespread use of the case payment system, on form of PPS, under the NHI in Taiwan may result in patient dumping based on the experiences in the United States. Therefore, it is reasonable to believe that patient dumping has occurred in Taiwan. However, although plenty of studies have documented the increasing frequency of patient dumping in the United States, little empirical research has been performed to explore the issues related to patient dumping under the NHI in Taiwan. This study was carried out to examine whether patient dumping has occurred under the NHI, to observe the perceived prevalence of patient dumping by hospitals, to explore the attitudes of hospital administrators toward the practice of patient dumping in Taiwan, and to understand the relationships between implementation of a prospective payment system and patient dumping. The results of this study not only help policy makers realize the extent of patient dumping among hospitals in Taiwan, but it also help identify the issue of patient dumping for health professionals.

METHODS

Study subjects consisted of administrators in general hospitals that were accredited by the Taiwan Joint Commission on Hospital Accreditation as medical centers, regional hospitals, or district teaching hospitals in the years 2000 and 2001. All of the above hospitals were also accredited as teaching hospitals, which have been described as more likely to be candidate receiving hospitals for patient dumping.(3) The study population amounted to 128 administrators in general hospitals, consisting of 17 medical centers, 63 regional hospitals, and 48 district teaching hospitals. A self-administered postal survey was conducted using a structured questionnaire to assess the prevalence of patient dumping from September 15 through November 5, 2002. During this period, two follow-up mailings and calls to those who did not respond were also performed to encourage their participation and to increase the response rate.

The questionnaire used in this study consisted of three parts. The first part, perceived prevalence of patient dumping was developed mainly based on a survey conducted by Schlesinger et al. and included four questions to measure the perceived prevalence of patient dumping.(1) First, hospital administrators were asked to rate the extent to which patient dumping occurred in their service areas. The responses to this question were defined by "very serious," "serious," "moderate," "not serious," "not at all," and "do not know". Second, administrators were asked to estimate the percentage of hospitals engaging in the practice of patient dumping in their service areas. Third, administrators were asked to estimate the percentage of emergency patients received by their hospitals that were transferred from other hospitals because of economic reasons. Fourth, administrators were also asked to estimate the percentage of inpatients in their hospitals that were transferred from other hospitals because of economic reasons.

The second part of this questionnaire was designed to understand administrators' attitudes toward patient dumping. This part consisted of six questions developed by a research team through literature reviews and interviews with six hospital administrators including two administrators each from medical centers, regional hospitals, and district teaching hospitals. The first question asked administrators to rate the extent to which their hospitals were financially adversely affected by patients dumped from other hospitals. The responses to this question included "very serious," "serious," "moderate," "not serious," "not at all," and "do not know". The second and third questions asked administrators which type of hospital ownership (public, private nonprofit, and private for-profit) or hospital teaching status (yes or no) was more likely to transfer patients because of economic reasons. The fourth question asked the administrators to rate the extent to which they agreed that implementation of the case payment system had increased the incidence of patient dumping. The fifth and sixth questions asked administrators to rate the extent to which they agreed that patient dumping increased the mortality rate of transferred patients or increased the use of medical resources. The responses to the fourth to sixth questions were all defined by "greatly agree," "agree," "somewhat agree," "disagree," "greatly disagree," and "do not know."

The third part was composed of background questions about the hospitals such as hospital location (northern, central, southern, and eastern), hospital ownership (public, private nonprofit, and private for-profit), hospital level (medical center, regional hospital, and district teaching hospital), and number of hospital beds. A cover letter specifying the purpose of this study and definition of patient dumping also accompanied the self-administered questionnaire.

To test for content validity of this questionnaire, five experts were invited to examine the questions related to appropriateness, importance, and clarity of each item of the patient dumping 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' sugges-

tions. A pretest was also conducted using 12 hospital administrators to determine whether the respondents had any difficulty understanding the questionnaire. Additional revisions were made to improve clarity, choice of words, completion rate, and length of this questionnaire.

Statistical analyses were conducted using the Statistical Package for the Social Sciences (SPSS 10.0 for Windows, 1997, SPSS, Chicago, Ill). Descriptive statistical analyses including frequency, percentage, mean, and standard deviation were performed on all identified variables. One-way analysis of variance (ANOVA) was also conducted to examine the relationships between administrators' perceived prevalence of the percentage of patients received by their emergency department, and percentage of inpatients received by their hospitals that were transferred from other hospitals because of economic reasons and hospital location (northern, central, southern, and eastern), hospital ownership (public, private nonprofit, and private for-profit), and hospital level (medical center, regional hospital, and district teaching hospital). A two-sided p value of less than or equal to 0.05 was considered statistically significant.

RESULTS

Data were collected by means of a mailed survey distributed to 128 hospital administrators. In total, 99 questionnaires were returned for an overall response rate of 77.3%. The demographic characteristics of the sampled hospitals were similar to those of all general hospitals that were accredited by the Taiwan Joint Commission on Hospital Accreditation in the years 2000 and 2001 in terms of hospital level, hospital ownership, and hospital location (Table 1). Therefore, although there is no means to demonstrate that all demographic characteristics of the sampled hospitals were similar to those of the entire population of hospitals, the researchers have confidence to conclude that the sampled hospitals represent the entire population of hospitals to a certain degree.

Of the respondents, 16.2% of administrators were in medical centers, 26.3% were in district teaching hospitals, and the overwhelming majority (57.6%) were in regional hospitals. With regard to hospital ownership, 43.4% of administrators were in public hospitals, 33.3% were in private nonprofit

hospitals, and the other 23.2% were in private forprofit hospitals. As for hospital location, the percentages of those administrators in the northern, central, southern, and eastern parts of Taiwan were 45.5%, 24.2%, 27.3%, and 3.0%, respectively.

Perceived prevalence of patient dumping

Among the respondents, 2.0% answered that the perceived extent of patient dumping which occurred in their service areas was "very serious", 9.1% "serious", 28.4% "moderate", 34.3% "not serious", and

Table 1. Characteristics of the Entire Population of Hospitals and Sampled Hospitals

Variable	Population hospitals	Sampled hospitals	$p(X^2)$
	No. (%)	No. (%)	
Hospital level			0.079 (5.1)
Medical center	17 (13.3)	16 (16.2)	
Regional hospital	63 (48.2)	57 (57.6)	
District teaching hospital	48 (36.8)	26 (26.3)	
Total	128 (100.0)	99 (100.0)	
Hospital location			0.810 (1.0)
Northern	54 (42.2)	45 (45.5)	
Central	33 (25.8)	24 (24.2)	
Southern	35 (27.3)	27 (27.3)	
Eastern	6 (4.7)	3 (3.0)	
Total	128 (100.0)	99 (100.0)	
Hospital ownership			0.352 (2.1)
Public	49 (38.3)	43 (43.4)	
Private nonprofit	41 (32.0)	33 (33.3)	
Private for-profit	28 (29.7)	23 (23.2)	
Total	128 (100.0)	99 (100.0)	

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

Table 2. Perceived Prevalence of Patient Dumping in Respective Service Areas (N = 99).

Variable	No. (%)	Mean	S.D.	Max.	Min.
Extent that patient dumping occurred					
Very serious	2 (2.0)				
Serious	9 (9.1)				
Moderate	38 (28.4)				
Not serious	34 (34.3)				
Not at all	6 (6.1)				
Do not know	10 (10.1)				
Total	99 (100.0)				
Percentage of hospitals engaged in patient dumping					
No answer given	25 (25.3)				
Others (who answered this)	74 (74.7)	13.27	15.67	70.00	0
Total	99 (100.0)				
Percentage of emergency patients received by transfer from other hospitals					
No answer given	27 (27.3)				
Others (who answered this)	72 (72.7)	7.94	9.24	50.00	0
Total	99 (100.0)				
Percentage of inpatients received by transfer from other hospitals					
No answer given	29 (29.3)				
Others (who answered this)	70 (70.7)	7.57	8.61	30.00	0
Total	99 (100.0)				

S.D. = standard deviation.

6.1% "not at all" (Table 2). The other 10.1% of administrators answered "do not know" to this question. That is, over 39% of administrators replied that the extent of patient dumping which occurred in their service areas was moderate or above moderate. With respect to the perceived percentage of hospitals in their service areas which practiced patient dumping, 25 of 99 administrators returning the questionnaire were unable to answer this question. Among those respondents (N=74) who attempted to answer this question, the mean perceived percentage of hospitals which practiced patient dumping was 13.27% with a standard deviation of 15.67%.

As for the third and fourth questions, 72 and 70 of the 99 administrators were able to estimate the perceived percentages of emergency patients and inpatients transferred from other hospitals and received by their hospitals because of economic reasons, respectively. Among those respondents (N=72), the perceived percentage of emergency patients received by their hospitals dumped from other hospitals ranged from 0% to 50%, with a mean of 7.94% and a standard deviation of 9.24%. The mean percentage of inpatients received which were transferred from other hospitals was 7.57%, and the minimum and maximum were 0% and 30%, respectively.

Attitudes of administrators toward patient dumping

Table 3 summarizes attitudes of administrators toward patient dumping. With regard to the extent that hospitals were financially adversely affected by patient dumping, a very small percentage of respondents (2.0%) rated it as "very serious", 35.4% as "serious", 15.2% as "moderate", 22.2% as "not serious", and 18.2% respondents rated it as "not at all". As for hospital ownership and hospital teaching status associated with patient dumping, almost 2/3 (66.7%) of respondents thought that private for-profit hospitals were more likely to dump patients, and the overwhelming majority of respondents (58.6%) considered that non-teaching hospitals had a greater tendency than teaching hospitals to transfer patients because of economic reasons.

With respect to the effects of the case payment system on patient dumping, over 75% of respondents "greatly agree" or "agree" that implementation of the case payment had escalated the incidence of patient

Table 3. Administrators' Attitudes toward Patient Dumping (N=99).

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dumping. In addition, almost 3/4 (73.7%) of respondents "greatly agree" or "agree" that patient dumping leads to higher mortality rates, and 75.7% of respondents "greatly agree" or "agree" that patient dumping is associated with increased use of medical resources.

Relationships between prevalence of patient dumping and hospital characteristics

As for the administrators' perceived percentage of patients received by their hospitals that had been transferred from other hospitals because of economic reasons, this study found no statistically significant relationship between the perceived percentage of emergency patients received and hospital characteristics (Table 4). However, a statistically significant relationship existed between the administrators' per-

Table 4. Relationships between Hospital Characteristics and Hospital Administrators' Perceived Percentages of Receiving Emergency Patients Dumped from Other Hospitals (N=72).

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	Perceived percentage				
Variable	N	Mean	S.D.	F	
Hospital level				2.614	
Medical center	10	14.00	8.35		
Regional hospital	40	6.70	8.07		
District hospital	22	6.93	10.84		
Hospital ownership				0.560	
Public	35	9.09	11.01		
Private non-profit	16	7.34	8.31		
Private for-profit	21	6.48	6.35		
Hospital location				0.292	
Northern	29	7.69	6.81		
Central	20	7.02	8.34		
Southern	20	8.61	12.29		
Eastern	3	12.00	15.72		

F: one-way ANOVA; S.D.: standard deviation.

Table 5. Relationships between Hospital Characteristics and Hospital Administrators' Perceived Percentages of Receiving Inpatients Dumped from Other Hospitals (N=70).

	Perceived percentage			
Variable	N	Mean	S.D.	F
Hospital level				5.344**
Medical center	10	15.30	8.81	
Regional hospital	38	6.04	7.47	
District hospital	22	6.70	8.86	
Hospital ownership				0.444
Public	35	8.31	9.45	
Private non-profit	15	7.87	8.10	
Private for-profit	20	6.05	7.58	
Hospital location				0.623
Northern	28	6.57	6.42	
Central	19	8.18	10.05	
Southern	20	7.50	9.14	
Eastern	3	13.50	15.06	

^{**}p<0.01; F: one-way ANOVA; S.D.: standard deviation.

ceived percentage of inpatients received by their hospitals that had been transferred from other hospitals because of economic reasons and hospital level (p=0.007) (Table 5). That is, administrators in medical centers perceived that a higher percentage of inpatients were received which had been transferred from other hospitals because of economic reasons than their counterparts in regional hospitals or in district teaching hospitals.

DISCUSSION

Perceived prevalence of patient dumping

In this study, we found that patient dumping is a very serious and widespread problem in Taiwan although very few researchers have ever mentioned this issue. Of the respondents, 83 of the 99 (83.8%) administrators perceived that patient dumping did occur in their service areas to a certain degree (from "not serious" to "very serious") regardless of their hospital location, hospital level, or hospital ownership. This demonstrates that patient dumping is not a phenomenon exclusive to the United States, but it also exists in the healthcare industry in Taiwan.

In addition, a total of 67 of 74 (90.5%) administrators who attempted to answer the question on the prevalence of patient dumping perceived that different percentages (mean=13.27%) of hospitals transferred patients solely because of economic considerations in their service areas. Although the mean percentage (13.27%) was much lower than that (64.7%) of a study conducted by Schlesinger et al. using community mental health centers in the United States, (1) it is similar to the finding (13%) of a parallel study conducted with 1363 CEOs of hospitals in the United States in 1992, (16) and it is also analogous to the fact that about 1 in 10 acute care hospitals have actually violated the anti-dumping statute throughout the United States. (17)

Hospital ownership and patient dumping

The results of this study indicated that the majority (66.7%) of administrators considered private for-profit hospitals as being more likely to transfer patients because of economic reasons. This is consistent with the observation of Hylton that private for-profit hospitals have a long tradition of refusing admissions to economically undesirable patients. (2) It is also supported by the empirical studies of Relman

and Hurley et al. who found that patient dumping was more prevalent in regions characterized by a large proportion of private for-profit hospitals. (5,18) Lin et al. proposed that a possible reason contributing to the relationship between patient dumping practices and hospital ownership was that investorowned or for-profit hospitals were more reactive to cost containment due to a greater interest in maximizing profits. (15) Under the profit-oriented motive, physicians in private hospitals were eventually more likely to be impelled to selectively admit low-cost or profitable patients and to discourage the admissions of high-cost or unprofitable patients in order to achieve maximal profits.

Impact of patient dumping on hospitals

It is not surprising to find that more than 1/3 (37.4%) of administrators indicated that the financial integrity of Taiwan's hospitals is currently severely impaired by patient dumping. According to the experiences in the United States with patient dumping, Schiff et al. reported that patient dumping cost receiving hospitals millions of dollars annually. (13) Ansell and Schiff estimated that the annual costs of patient dumping to public hospitals in the United States was approximately US\$ 1.04 billion. (8) Bernard et al. also indicated that dumped patients used more hospital resources than did other patients because of the delay in treatment or the severity of the illness.(12) This is in line with our findings that approximately 3/4 (74.7%) of respondents agreed that patient dumping led to increased use of medical resources.

As a result, patient dumping not only shifts the financial burden from transferred hospitals to receiving hospitals, but it also aggravates the financial integrity of the receiving hospitals. In addition, patient dumping also increases the total medical expenditures due to unnecessary or duplicated services. Therefore, solving the problem of patient dumping would be one of the answers to escalating medical expenditures of the NHI we face here in Taiwan.

Impact of patient dumping on patients

With respect to the impact of patient dumping on patients' health, the study showed that 73.7% of respondents greatly agreed or agreed that patient dumping resulted in increased mortality rates. This is consistent with the conclusion of an article published in the New England Journal of Medicine that the percentage of patients transferred for economic reasons who died was more than twice that of other patients. (19) Another noteworthy report to a Congressional subcommittee by Ansell stated that nearly 1 in every 10 dumped patients died in receiving hospitals. (20) Therefore, patient dumping is a very serious problem for patient health. A delay in treatment resulting from patient dumping would obviously endanger the lives of patients who require immediate therapy. In addition, the elevated pain and distress caused by transfers or delays in treatment could also be detrimental to patients' physical and mental well-being.

Case payment and patient dumping

This study also found that 3/4 of administrators (75.8%) agreed that implementation of the case payment system had increased the incidence of patient dumping. This finding is in accord with results of a study by Weissman who found that the occurrence of patient dumping was related to implementation of a prospective PPS.⁽³⁾

The BNHI initiated a case payment system, one form of PPS, to accompany the advent of the NHI in 1995 in Taiwan. Under case payment, hospitals are paid a fixed amount for each treated patient based on the principal discharge diagnosis or the principal operative procedure rather than on the actual inpatient cost of the resources used. This payment scheme means that hospitals can keep or have to absorb the differential between its cost and the rate established for providing patient care. Therefore, the case payment system might create financial incentives for hospitals to selectively admit profitable patients and to transfer complex or unprofitable patients, even if they still could have provided treatment themselves. (14) This is supported by the conclusion of a study by Ansell and Schiff that patient dumping occurs based on unprofitable diagnosis related groups.(8)

The purpose of this national study was to explore the prevalence of patient dumping based on the opinions of hospital administrators in Taiwan. However, there were a couple of limitations to this study. First, because the data in this study were obtained from a self-administered survey by hospital administrators throughout Taiwan, some data may

have been over-reported or under-reported. The extent of over-reporting and under-reporting is difficult to estimate, but could have resulted in overestimation or underestimation of the prevalence level of patient dumping in Taiwan. Second, some hospital administrators were not familiar with the issues related to patient dumping although the definition of patient dumping was provided at the beginning of the questionnaire. Therefore, approximately one quarter of the administrators did not know how to answer questions pertaining to the percentage of hospitals engaged in patient dumping in their service areas.

Results of this study lead use to conclude that patient dumping is a serious and widespread problem in the healthcare industry of Taiwan. It can jeopardize patient health and impair the financial integrity of receiving hospitals. Implementation of a case payment system and a hospital global budget system may have even worsened the situation in Taiwan. However, very few studies have addressed the issues related to patient dumping in Taiwan to date. Patient dumping not only exists, but may also have currently severely impaired the financial integrity of many hospitals in Taiwan. Therefore, it is recommended that applicable statutes be established and enacted to prevent hospitals in Taiwan from transferring patients simply because of monetary reasons. In particular, patients in need of emergency care should be transferred only to receive better or more appropriate medical care. Patient transfers based solely on economic considerations should be prohibited, and hospitals engaging in the practice should be penalized. It is also recommended that a system be established to track the actual number of patient dumping instances that occur in receiving hospitals. This can help policy makers identify the hospitals in which patients are more likely to be transferred because of economic reasons.

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台灣推趕病人之現況

林恆慶 楊銘欽 陳楚杰 湯藻薰

背 景: 本研究旨在瞭解全民健保下是否有推趕病人發生,並探討台灣地區的醫院院長對推 趕病人之態度。

方法: 本研究之對象爲醫策會於2000及2001年評鑑爲醫學中心、區域醫院及地區教學醫院的院長,採郵寄自填式問卷調查此128家醫院院長。

結果: 回答問卷的99位院長中,不論醫院地點、醫院層級及醫院權屬別,有83 (83.8%)位覺得在他們所在地區確實有推趕病人的情形發生。在嘗試回答推趕病人比例的74位院長中,有67 (90.5%)位回答在他們所在地區有不同比例的醫院(平均值=13.27%)有推趕病人的情形。除此之外,本研究發現院長覺得他們醫院收到被其他醫院推趕的急診病人比例與醫院特性沒有統計上的顯著相關性,然而在院長覺得他們醫院所收到被其他醫院推趕的住院病人比例卻與醫院層級存在統計上的顯著相關性(p=0.007)。

結論: 本研究結論推趕病人在台灣的衛生產業中是相當嚴重及普遍的,推趕病人會危害病人的健康及醫院的財務狀況,台灣論病例計酬制度的實施加劇推趕病人的情況。 (長庚醫誌 2004;27:35-43)

關鍵字:推趕病人,台灣,全民健保。