Original Article

Fee Splitting among General Practitioners: A Cross-Sectional Study in Iran

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Abstract

Background: Fee splitting is a process whereby a physician refers a patient to another physician or a healthcare facility and receives a portion of the charge in return. This survey was conducted to study general practitioners' (GPs) attitudes toward fee splitting as well as the prevalence, causes, and consequences of this process.

Methods: This is a cross-sectional study on 223 general practitioners in 2013. Concerning the causes and consequences of fee splitting, an unpublished qualitative study was conducted by interviewing a number of GPs and specialists and the questionnaire options were the results of the information obtained from this study.

Results: Of the total 320 GPs, 247 returned the questionnaires. The response rate was 77.18%. Of the 247 returned questionnaires, 223 fulfilled the inclusion criteria. Among the participants, 69.1% considered fee splitting completely wrong and 23.2% (frequently or rarely) practiced fee splitting. The present study showed that the prevalence of fee splitting among physicians who had positive attitudes toward fee splitting was 4.63 times higher than those who had negative attitudes. In addition, this study showed that, compared to private hospitals, fee splitting is less practiced in public hospitals. The major cause of fee splitting was found to be unrealistic/unfair tariffs and the main consequence of fee splitting was thought to be an increase in the number of unnecessary patient referrals.

Conclusion: Fee splitting is an unethical act, contradicts the goals of the medical profession, and undermines patient's best interest. In Iran, there is no code of ethics on fee splitting, but in this study, it was found that the majority of GPs considered it unethical. However, among those who had negative attitudes toward fee splitting, there were physicians who did practice fee splitting. The results of the study showed that physicians who had a positive attitude toward fee splitting practiced it more than others. Therefore, if physicians consider fee splitting unethical, its rate will certainly decrease. The study claims that to decrease such practice, the healthcare system has to revise the tariffs.

Keywords: Fee splitting, Iran, kickback, medical ethics

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Introduction

Fee splitting is a process whereby a physician refers a patient to another physician or a healthcare facility and receives a portion of the charge in return.[1] In other words, in fee splitting, a physician receives a portion of the charges paid for the healthcare services while other healthcare professionals have actually done something for the patient.[2] Other terms used for fee splitting are "kickbacks" and "commission". Kickback refers to the fee paid by one party to another to refer someone to a business or otherwise as a source of income for the payer. However, these two terms are used interchangeably.[3] Fee splitting, commonly, is said to be the money a specialist gives to a general practitioner (GP) for referring patients to him/her.[4] Fee splitting, nevertheless, is not limited to the relation between GPs and specialists; it is also common among laboratories, medical imaging centers, medical equipment manufacturers, and other facilities. Even specialists can refer patients to each other, which are also considered to be fee splitting.[5] Because of the possibility of the involvement of GPs, this study has been conducted on GPs to examine their perspective about fee splitting. The very important issue in fee splitting is the inherent conflicts of interest which could potentially influence the clinical judgment of the physician. For example, a doctor who must first and foremost consider the patient's best interests, in order to earn more money, may unnecessarily refer patients to other physicians or healthcare facilities. Thus, in the code of medical ethics of some countries' medical associations, fee splitting is seen as an unethical practice. For instance, the American Medical Association (AMA) codes of medical ethics states, "Payment by or to a physician solely for the referral of a patient is fee splitting and is unethical. A physician should not accept payment of any kind, in any form, from any source, such as a pharmaceutical company or a pharmacist, an optical company, or the manufacturer of medical appliances and devices, for

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prescribing or referring a patient to the mentioned sources".[6] The British General Medical Council (GMC) also states that "accepting or offering any money for referring patients to benefit from special services leads to the erosion of the patient's trust; so these referrals should only be on the patients' best interests".[7] Moreover, in the ethical codes of medical associations of countries such as Canada,[8–10] India,[11] the Philippines,[12] Malaysia,[13] as well as the World Medical Association (WMA),[14] fee splitting is considered to be an unethical practice. In the Islamic Republic of Iran, article 17 of the disciplinary regulations about violations of guilds and professions by medical professionals and allied medical service providers, adopted in 1994, states, "Health professionals are not allowed to receive or pay any money for referring patients to physicians or healthcare facilities".[15] In 2004, however, this regulation was revised, and for unknown reasons, the above article was removed. However, article 14 states that: "if convincing patients to be visited by a physician is against the prestige of the medical practice, it is prohibited".[16]

In Iran, the healthcare payment system is based on fee-for-service. In this system, healthcare professionals receive payments based on the amount of services provided. Therefore, the income of physicians or healthcare facilities is dependent on the number of referrals. For instance, a heart surgeon receives referrals from cardiologists or a physician may refer patients to medical laboratories. Even so, they are looking for ways to obtain more patients, and in this system, the possibility of unethical practices such as fee splitting is potentially high.

A review of the literature did not show any study or reports on the prevalence or reasons of fee splitting among Iranian physicians and facilities. Based on hearsay, such a relationship exists among physicians. Fee splitting is an indecent act in the medical professions and has consequences such as distrust between physicians and patients. In this study, various aspects of fee splitting were investigated to find some solutions for the problem.

Materials and Methods

This was a quantitative cross-sectional study conducted on 223 GPs, in order to document their attitudes toward fee splitting and determine its prevalence, causes, and consequences. The study population consisted of GPs participating in Continuing Medical Education programs held in Tehran in 2013. The researcher believed that since in many cases, GPs are one party of the fee splitting practice, it is important to know how the GPs are involved in it. The inclusion criteria comprised of being a GP and consenting to complete the questionnaires. The exclusion criteria were met when the GPs did not complete at least 80% of the questionnaires. The reason behind choosing 80% is that the researchers had two ways for analyzing the data: 1) the questions which were answered by each respondent would be analyzed separately and the result would be a group of heterogeneous respondents; 2) To obtain homogenous respondents, in this case, if we chose all the respondents, we would have a great number of respondents and if we only accepted the respondents who answered all the questions, we would have a very limited number of respondents and consequently the reliability of the research would be affected. Having a general overview of the whole respondents, the researchers chose to analyze the data related to those who answered 80% of the questions. The sample size was determined based on a pilot study on 28 GPs; considering 7% accuracy rate (d = 7%), 196 subjects were included in the study. Given the possibility of loss of cases due to partial completion of questionnaires, additional questionnaires were distributed.

Credibility of the questionnaire: The questionnaire was designed by the researchers based on the objectives of the study. Concerning causes and consequences of fee splitting, a qualitative unpublished study was conducted by interviewing a number of GPs and specialists and the questionnaire options were the result of the information obtained from this study.

The content validity of the questionnaire was assessed by an expert panel of 15 bioethicists and GPs. To assess the face validity of the questionnaire, the viewpoints of an expert were acquired in questionnaire designing. To assess the reliability of the questionnaire, using 28 general practitioners' viewpoints, the test-retest reliability method was used. To assess the reliability of each question, interclass correlation (ICC) index was used. ICC, in different questions, ranged from 67% to 100%. However, the median was 77%. Moreover, to assess the internal consistency of the questionnaire, Cronbach's alpha coefficient was used (89%).

The questionnaires were completed anonymously. They included a short cover letter in which the purpose of the study was explained, the participants were assured of confidentiality, and the definition of the term "fee splitting" was provided.

The questions included GPs' attitudes toward fee splitting, the estimated percentage of GPs' colleagues who perform fee splitting, the prevalence of fee splitting among the studied GPs, the causes of fee splitting, and its possible consequences.

To understand the attitudes of GPs toward fee splitting, a 5-point Likert assessment, ranging from "completely correct" to "completely wrong", was used. The prevalence of fee splitting was investigated directly and indirectly. Using a 5-point Likert assessment, ranging from 1% to 100%, with intervals of 20, first, they were asked to estimate the percentage of their colleagues who they think may perform fee splitting. Then they were directly asked to answer this question: Do you ever practice fee splitting? A) No, never; B) Yes, rarely; C) Yes, frequently. With regard to the causes and consequences of fee splitting, they were asked to express their views about 11 and 8 main proposed options, respectively, by checking high, average, or low.

The final part of the questionnaire consisted of questions on demographic characteristics of the study subjects, including age, sex, duration, sector and location of their practice. The questionnaires were completed through self-report.

The aim of the study was to investigate the relation between age (45 years and younger and 45 years and older), sex, practice duration (less than 10 years, 10 to 20 years, and more than 20 years), practice sector (private, public, private and public), the city of practice (practicing in the megacity of Tehran, and practicing in other cities), and fee splitting. Since the GPs taken part in conferences were from different cities, it was not possible to analyze the data based on the respondents' cities of practice separately. Therefore the questionnaire was designed in a way to determine whether they are from Tehran or from other cities (small or large).

Statistical analysis: The data were analyzed using SPSS software (version 21, SPSS Inc., Chicago, IL, USA). To describe the quantitative variables analytically, mean and standard deviation were used, and to describe the qualitative variables, frequencies and percentages were used. As interval estimation, 95% confidence

intervals were calculated. To investigate the association between fee splitting and independent variables, chi-square test or Fisher's exact test was used. Those variables in univariate analysis (with the effect of an independent variable on response variable) which had a *P*-value below 0.20 were entered into the multiple logistic regression models. The effects of independent variables on the response variable were represented with odds ratios and respective confidence intervals. A *P*-value below 0.05 was considered as statistically significant.

Results

Out of a total of 320 distributed questionnaires, 247 were returned. The response rate was 77.18%. In addition, 223 of the 247 returned questionnaires met the inclusion criteria. The mean age of the surveyed physicians was 43.2 years, and 56.5% of respondents were male. The mean and standard deviation of practice duration was 15 ± 7 years. Moreover, 40% of physicians worked in the private sector and 32.7% worked in both private and public sectors. Among the respondents, 52.1% worked in the capital city of Tehran (Table 1).

The results showed that 69.1%, 18.4%, 4.9%, and 5.8% of the study subjects considered fee splitting as completely wrong, partially wrong, neutral, and partially right action, respectively. Only 1.8% of physicians considered it as a relatively right action.

Regarding the prevalence of fee splitting, 33.8% of the respondents believed that the ratio of fee splitting among their colleagues was at least 40%. Most of the GPs (38.9%) believed that the prevalence of fee splitting among their colleagues was 21% to 40%.

Concerning the prevalence of fee splitting among the study subjects, it was found that 3.6% frequently, 28.6% rarely, and 67.8% never practiced fee splitting. The study, however, revealed that 32.2% of the study subjects (frequently or rarely) had already practiced fee splitting.

Whether there was any relationship between physicians' attitudes and the practice of fee splitting was the critical question of the present research. The study showed that 3.1% and 27.6% of the participants who considered fee splitting as a wrong action (completely or partially) had, respectively, frequently and rarely practiced fee splitting. In other words, in total, 30.7% of the study subjects, in spite of their negative attitudes towards fee splitting, practiced it to some extent. On the other hand, 11.8% and 41.2% (53% in total) of those who believed that performing fee splitting was right (completely or partially), respectively, frequently and rarely practiced fee splitting. Therefore, the study subjects who believed performing fee splitting was right, practiced it significantly more than others and the relationship was about to be significant ($P = 0.058$).

Furthermore, the relationship between the study subjects' demographic characteristics, and their attitudes toward the practice of fee splitting was surveyed. The results showed that GPs working in large cities had practiced fee splitting 10% more than GPs in small cities, but the difference was not significant ($P = 0.117$). No other significant relationship was found. Table 2 shows the relationship between demographic characteristics of the study subjects, and their attitudes toward the practice of fee splitting.

Moreover, the results of multiple logistic regressions (Table 3) indicated that the study subjects with a positive attitude toward fee splitting practiced it 4.63 times more than those with negative attitudes ($P > 0.001$). Moreover, the subjects who practiced only in the private sector practiced fee splitting 1.81 times more than others. This relationship was about to be significant ($P = 0.056$).

Concerning the cause of fee splitting, from among 11 proposed options, unrealistic healthcare tariffs, economic problems of physicians, and the lack of supervision and monitoring were identified as the main cause by 71.2%, 63.1%, and 62.9% of participants, respectively. Among other factors, lack of full insurance coverage, some physicians' poor ethical commitments, lack of an appropriate patient referral system, direct financial relationship between physicians and patients, greed of some doctors, physicians' unawareness of the unethical nature of fee splitting, provision of higher quality medical care, and assisting patients to prevent confusion in finding good facilities were, respectively, the most important causes expressed by participants.

From among the 8 suggested consequences of fee splitting, the unnecessary rise in the number of referrals (76.7%) was chosen as the major consequence. In addition, reduction of healthcare quality and damage to GPs' status (65.9% and 62.8%, respectively) were

Table 1. Demographic characteristics of the participants (n = 223).

Variable	Number (percentage)
Sex	
Male	126 (56.5)
Female	97 (43.5)
Age(year)	
45<	132 (61.1)
≥ 45	84 (38.9)
Mean ± standard deviation	43.2 ± 7
Duration of practice (year)	
<10	41 (18.8)
20–10	144 (66.1)
> 20	33 (15.1)
Mean ± standard divination	15 ± 7
The type of hospital	
Private sector	87 (39.5)
Public sector	61 (27.7)
Public and private sectors	72 (32.7)
The city of practice	
Tehran	114 (52.1)
Other cities	105 (47.9)

Table 2. The relationship between demographic characteristics of study subjects, and their attitudes toward the practice of fee splitting (n = 223).

		Fee splitting			
		Attitude (positive)		Practice of fee splitting	
Variable	**Number**	**Percentage (95% CI)**	***P****	**Percentage (95% CI)**	***P****
Age			0.314		0.451
≤ 45	131	8.3 (3.6–13)		30 (22.2–37.8)	
> 45	84	4.8 (2–9.4)		34.9 (24.7–45.1)	
Sex			0.414		0.380
Male	126	6.3 (2.1–10.5)		29.8 (21.8–37.8)	
Female	97	9.3 (3.5–15.1)		35.4 (25.9–44.9)	
Practice duration			0.574		0.531
< 10	41	7.3 (0–15.3)		24.4 (11.3–37.5)	
20–10	143	8.3 (3.8–12.8)		33.8 (26–41.6)	
> 20	33	3 (0–8.8)		31.3 (15.5–47.1)	
Practice sector			0.416		0.124
Private	87	5.7 (0.8–10.6)		38.8 (28.6–49)	
Public	60	6.6 (0.3–12.9)		33.3 (21.4–45.2)	
Private and public	72	11.1 (3.8–18.4)		23.6 (13.8–33.4)	
City of practice			0.668		0.117
Large	114	7 (2.3–11.7)		37.2 (28.3–46.1)	
Small	104	8.6 (3.2–14)		27.2 (9.9–24.5)	

**P*-value is related to chi-square test.

Table 3. Results of multiple logistic regressions regarding factors influencing fee splitting.

Variable	**Odds ratio**	**Confidence interval**	***P- value***
Attitude (reference = negative)	- - -	- - -	- - -
positive	4.63	2.13–10.07	< 0.001
Practice sector (reference = public sector)	- - -	- - -	- - -
Private sector	1.81	0.99–3.31	0.056

the second and third consequences. The participants believed that imposing undue expenditures on patients and the healthcare system, the effect of fee splitting on physicians' clinical judgment, damaging the physician-patient relationship and trust, increasing lawsuits against physicians, and increasing the rate of physicians' medical errors were, respectively, the most important consequences of fee splitting.

Discussion

As mentioned in the introduction, through searching the internet using related keywords, no quantitative study was found in Iran or other countries about fee splitting. However, fee splitting is considered an unethical phenomenon and contradicts the professional duties of physicians and the best interests of patients.[6–15] Although there are no ethical codes concerning fee splitting in Iran, the study showed that 78.5% of GPs believed that fee splitting is an unethical action. However, a significant percentage of the GPs in the study (30.7%), in spite of their negative attitude towards fee splitting, practiced it frequently or rarely. This means that despite the GPs' awareness of the immorality and unethical nature of fee splitting, they practiced it.

Nevertheless, there is a significant association between attitude toward fee splitting and practicing fee splitting. GPs with positive attitudes toward fee splitting practiced it 4.63 times more than those with negative attitudes (Table 3). In other words, the more positive the attitude of the GP is toward fee splitting, the more likely it is that the physician practices it and vice versa. This reveals the fact that by educating and internalizing the unethical nature of fee splitting among GPs, there may be a reduction in the percentage of physicians practicing fee splitting.

As mentioned in the result section, most surveyed GPs believed that the prevalence of fee splitting practice among their colleagues was 21% to 40%. When the GPs were asked about performing fee splitting, 32.2% of them expressed that they did to some extent (frequently or rarely). It is roughly the same amount as they believed among their colleagues.

No significant association was found with regard to the GPs' demographic characteristics, such as age, sex, practice duration, and the city where they practiced, as shown in Table 2. Concerning the practice sector, private or public, the GPs practicing in the private sector practiced fee splitting 1.81 times more than those who practiced in the public sector, which is very close to significant (Table 3). In most of the public sector, laboratory, imaging facilities, and the like (which are usually located inside hospitals) as well as physicians' practices are under close supervision. Therefore, it is less possible for physicians in the public sector to practice fee splitting.

It was found that unrealistic tariffs are the main cause of fee splitting among GPs and the other factors are not as important as this one. Thus, policy makers and relevant authorities need to reform the payment system in a way that fee splitting cannot be

justified by practicing physicians.

Among the negative consequences of fee splitting, rise in unnecessary referrals, decrease in the quality of health care, damage to physicians' status in the society, and imposing undue expenditures on patients and the healthcare system are, respectively, the highest ranking consequences. Therefore, they should be taken into consideration and measures should be taken to avoid such consequences. Although apparently changing the tariffs to a realistic amount imposes undue expenditures on the health care system, through prevention of the burdensome consequences of practicing fee splitting, eventually, the health expenditures will decrease.

One of the limitations of this study is that those who did not answer the questions or did not completely answer all the questions were excluded from the study, and this can be a source of selection bias. However, we tried our best to decrease non-response rate. Having general overview of the whole respondents, we attained 78% response rate which is good for such a sensitive issue (not too many people and not limited number of respondents). In this study, GPs were divided into two groups; those practicing in Tehran and those practicing in other cities. Since most of the participants were GPs taking part in Continuing Medical Education programs held in Tehran, the participants were probably mostly physicians who practice in Tehran and the cities around it. Consequently, the sample size may not be a good representative of GPs of all cities of Iran. To find out more detailed information about this practice, the authors suggest that further study should be done specially among medical specialists as well as –para-clinics and medical laboratories

The findings of the present study showed that despite most GPs' awareness of the immorality and unethical nature of fee splitting, a percentage of them practiced it. Most of them believed that the unrealistic tariffs are one of the main causes for practicing fee splitting. Fortunately, the Iranian government has been implementing some reforms in the healthcare system called *evolution in the health care system*, including reforming health care tariffs, for the past year. It is hoped that such fundamental reforms, in the near future, will result in the improvement of the healthcare system. Since GPs who have positive attitudes toward fee splitting practice it more than others, changing the physicians'' attitudes can be very effective in decreasing the incidence of fee splitting. This goal can be achieved through educating medical students and residents, and Continuing Medical Education for physicians. Moreover, developing a code of ethics on fee splitting is crucial. However, it seems that until these measures are taken, other preventive measures, such as relying on personal values of physicians and strict surveillance, cannot be very effective. Paying attention to these important factors results in the strengthening the patient-physician relationship that has been a long-standing trustful relationship in Iran, and the public trust in physicians.

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