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Research Article

The Impact of Various Payment Method on the Use and Quality of Health Services

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Abstract

From an economic point of view, the salary of the general practitioner group is relatively much lower than the specialists or doctors who doubles in management. However, in the regency or remote hospitals, the role of general practitioners is still very noticeable. When compared to general practitioners, the salary of specialists is greater in most hospitals. The definitions of a specialist doctor's salary is all the income they (specialist doctors) get from their profession as specialists include salary, *fee-for-service* income from private practice and in hospitals, and capitation income from health insurance. The impact of various payment method on the use and quality of health services is still a controversy . Various studies are still needed to determine the impact of changes of payment policy. However, some interesting preliminary data are found. Compared to the *fee-for-service* period, doctors who were paid monthly decreased hospital admissions by 13%, while doctors who were paid on the capitation model decreased admissions by 8%. The *fee-for-service* payment model tends to increase the cost of health services.

Keywords: specialist behavior, health sector, hospital, doctor, income, payment method

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1. Introduction

Nowadays, specialist doctors in Indonesian government-owned hospitals have a payment method that is assessed as *Earning at Risk*, where the basic salary of a specialist doctor is far below the basic salary of an international specialist doctor [1]. Diagrammatically, the compensation received by specialist doctors in Indonesia can be seen in Figure 1.

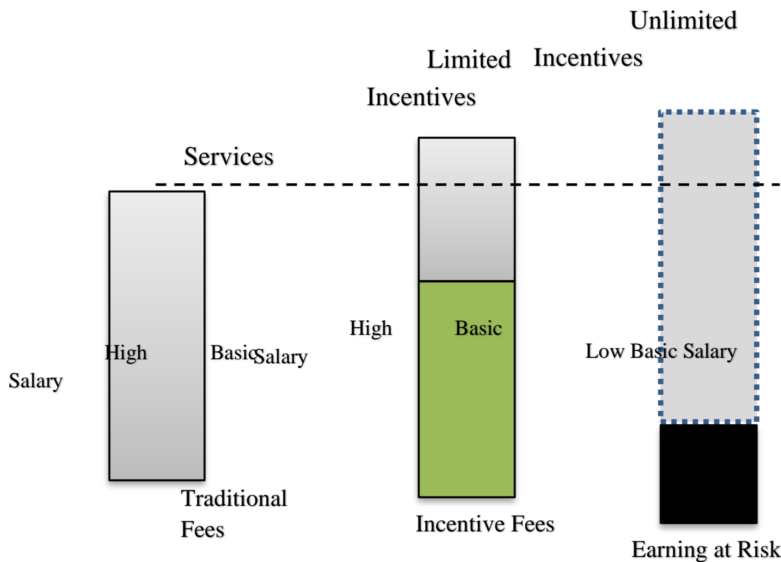

Figure 1. Types of Compensation

Figure 1 shows that specialist doctors in Indonesia have very low salaries, which are far below the market rates. However, the incentive system may not be limited to the form of incentives that can be obtained from working in private hospitals or private practices. Unlimited incentives resemble awards for a *superstar* artist or sportsman [2]. The result of unlimited incentives will cause difficulties in planning because there is no standard income. Besides, the difference between a high-salary doctor and a low-salary doctor is big.

The important question, is it true that the doctor's salary theory will influence their behavior? The research data above shows that specialist doctors work based on material compensation rather than non-material compensation, for example, heavenly life [3]. Heavenly behavior is more appropriate for groups of nuns or susters who work in hospitals or doctors who work based on religious missions. Therefore, the basic behavior of doctors is the same as the other professionals which follows the economic laws. Based on the economic theory of power supply the goal of doctors working to be in an atmosphere of material compensation can be described by the following equation:

$U = f\ (I,\ l)$ ....
(1)

U = Statisfaction

I = Income

L = Recreation

$I = S + aN + fT - C - T$ ....
(2)

S = Monthly Salary

aN = Capitation

fT = *Fee-for-service*

The equation which shows that doctors in doing the job normaly try to increase the salary as high as possible. However, as a normal human being, a doctor tries to take his or her time to pursue other satisfactions by doing recreation or taking time for fun things. There is no one who only spent life for earning money [4]. The basis for thinking about equation I do not place doctors as a profession that is purely based on human values, it is considered as another profession which the life satisfaction is influenced by economic factor [5]. If it is mixed with humanity functions, this equation is certainly added to the factor of human value by doctors (H = *humanity*). The formula will be U = f (I, L, H). In analyzing human values, the research has not been found on the composition of human values and economic values [6]. In some observations, many specialist doctors hold human values in their practice. Table 1 shows the srengths and weaknesses of *fee-for-service* payment method for specialists.

Table 1. The Srengths and Weaknesses of *Fee-for-Service* Payment Method for Specialists

Strenghts	Weaknesses
-*Fee-for-Service* method is a good	- Stimulate the doctors to give over-services because the economic motivation
mechanism to give the ‘reward’ or	(increase the income). This is probably
fee based on the level of difficulty of	cause *supplier induced demand*

the patients' condition	phenomenon.
-The doctors salary can be related to the work of dependents. In this case, the doctors salary will be connected on the patients complextivity problem.	-Doctors tend to give medical services to the cases that give them biggest profit.
-Doctors are stimulate to make the practices note to be better. They will have more productive treatment	- Have a tendency to increase the medical services inflation
-Patients have a strength to influence the doctors to give the best treatment for them	-It is difficult to arrange the previous budget expenditure

In the context of the economic aspect, a doctor's salary is influenced by various factors found in equation 2. The first factor is the salary which is received per month. The second factor is capitation. The definition of capitation is that, if a doctor is responsible for 2,000 people under his/her dependents and each person pays Rp. 1,000.00 per month (whether they get treatment or not), then they will get Rp.2,000,000.00 as their capitations. The third factor is *fee-for-service*, which means the fee received by a doctor after providing medical services. This income will be deducted from the doctor's service fees and taxes. The question is, what is the best payment method? Are hospital doctors paid a monthly salary? Is it capitation-based, *fee-for-service*, or a combination? To answer this question, the strengths and weaknesses of each should be observed.

2. The Payment Method

It is important to note that in reality, the payments using one method are rarely encountered. It is better to combine the three models. With the combination of the three models and additional compensation outside of money [7], the doctor's behavior can be managed more. To understand the impact of the payment method on doctors, various studies were conducted in Indonesia. Table 2 shows the strenghts and weaknesses of capitation payments for specialists doctor.

Table 2. The Strenghts and Weaknesses of Capitation Payments for Specialists Doctor

Strengths	Weaknesses
–Easy administration	–Doctors tend to choose the people who do not have complex diseases. This is related to the money risk that the doctors have if they handle the complex patient. It is possible to make '*supplier reduced demand*' happen.
-The medical treatment is not affected by the economic profit	-Doctors are less in giving the services for patients, it can be in the form of 'unfriendly', always in hurry, and make a bad behaviour. This will get worse if the doctors have many dependents.
-Make the expenditure budget preparation easier in medical treatment	-The note of their practices is not good
- Doctors are stimulated in minimalizing the cost of medical treatment. This can be a controversy with the doctors ethic, if the doctors are given the budget based on the people who become their dependents.	-If the goal of capitation is decreasing the budget over, the patients will be neglected or the patients are easy to be reffered to the hospital that have higher services. This results in the increase of the cost of services.

The specialist doctors were paid monthly salaries and *fee-for-service* medical services which was relatively low. The research was conducted twice experimentally on the number of medical services. Before the experiment, the payment method for specialist doctors was conducted in a *pool* with low medical services. The first experiment was to increase medical services with a shared medical service system that uses a *pool* system. The *pool* system means that all medical services are collected and will be distributed to specialist doctors with a certain formula. With a *pool* system, it is possible that specialist doctors who do not have activities will also receive a share. Table 3 shows the strenghts and weaknesses of monthly salary payment for specialists doctor.

Table 3. The Strenghts and Weaknesses of Monthly Salary Payment for Specialists Doctor

Strenghts	Weaknesses
-Easy administration	–Patients do not have much impact in leading the doctors to

	give the optimum services
-Medical treatment is not affected by the economic profit. This system is support the cooperation between doctors in overcoming the complex cases.	-Doctors are less interested in handling the patients
-Make the expenditure budget preparation easier to the health services	-The note of community practices are often bad

The second experiment was to increase the medical service with *fee-for-service* model. It was only specialist doctors who would be paid. The research design is explained in Figure 2.

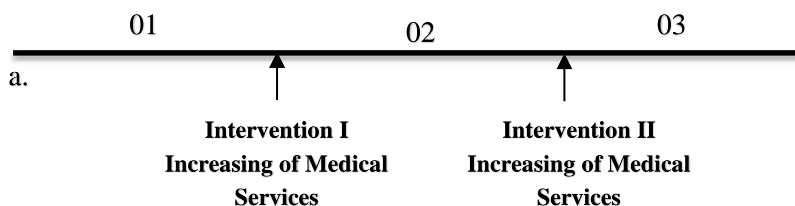

Figure 2. The Experimental Research Design in Change of Medical Services (JPM)

After intervention I, data collection showed that inpatient referrals for class II and III increased by 7.7% compared to the condition before intervention I. After intervention II there was an increase in inpatient referrals by 76.9% compared to the condition before the intervention. In class I and VIP patients, inpatient referrals increased by 100% compared to the condition before intervention I. After intervention II there was an increase in inpatient referrals by 400% compared to the condition before the intervention. These results indicate that the specialist doctors at the regional hospital have the same behavior regarding the economic nature of professionals [8]. Doctors are happy with *fee-for-service* payments based on a personal responsibility. This study did not discuss the side effects of *supplier-induced-demand.*

3. Income and Specialists Behaviour

Investigating the relationship between specialist doctors and the functional income of regional hospitals throughout Indonesia. This study aims to determine the effect of having a specialist doctor on hospital finances and to analyze the financial aspects and incentives for specialist doctors [9]. The results are as follows:

1. The top four specialists in the hospital can increase the admission of inpatient care facility, especially surgeons and internists. Various possible causes, namely, (a) surgical cases require treatment in the hospital; (b) with the increasing life expectancy of the Indonesian, there will be an increase in the prevalence of degenerative diseases; (c) the trend of decreasing birth rates and the distribution of community health centers and village midwives; and, (d) doctors who specialize in obstetrics and gynecology and pediatricians may have private practices or private clinics outside the hospital system. If the data is arranged in more detail into hospitals in Java and outside Java, then the influence of specialist doctors outside Java on the functional acceptance of hospitals is very small. This is because hospitals outside Java are mostly handled by general practitioners.
2. The top four specialists in the hospital can increase the hospital's outpatient admissions, especially the internists. It is interesting to note that the surgeons did not contribute much to the hospital income [10]. The surgeons likely perform outpatient treatment in private practice.
3. The top four specialists in the hospital could not increase the other visits (radiology, medical rehabilitation, pharmacy installation, etc)
4. The top four of specialists in the hospital, especially surgeon could increase the whole of the hospital visits.
5. The specialists except the top four specialists could increase the visits of hospital though the impact was small.
6. General practitioners and dentists could increase the visits of hospital eventhough the impact was small.

This study concludes that the specialist doctors in the regional general hospital (RSD) were not yet interested in working full time in the government sector because of low salaries and low incentives [11]. To overcome this condition, the doctors open private practices based on a *fee-for-service* system. It is understood that specialist doctors tend to be in economically strong areas and avoid being placed in economically weak areas. For example, a specialist in obstetrics and gynecology at Abepura Papua Hospital receives an incentive of Rp. 1,000,000.00 a month, and the possibility of getting additional from private practice is very small because the community around him or her is poor. As a result, doctors who specialize in obstetrics and gynecology tend to stay in Abepura only temporarily to fulfill the graduate mandatory apprenticeship work [12]. The situation is even worse in several places in Papua where there is no specialist doctor at the regional general hospital (RSD).

Examining specialist salary and job satisfaction. The data obtained about the specialist doctors salaries who work in the Central Surgical Installation of central general hospital (RSUP) X consists of an average salary of Rp. 538,754.42.00 with an average medical service of Rp. 415,526.32.00 a month. The total monthly salary in the central general hospital (RSUP) X is the average of IDR 954,280.80.00, while the income earned in private hospitals is in the form of honoraria IDR 5,315,789.50.00 and results from afternoon practice averaging IDR 4,060,526.30.00. The details can be seen in Table 4.

Table 4. Average Age, Years of Work, Number of Dependants, Amount of Expenses, Income of the Respondents

Variable	Average	Standard Deviation	The lowest	The highest	N
Age	46,11	4,67	39	58	38
Years of Work	13,61	929	1	34	38
Number of Dependants	4,24	1,75	1	9	38
Salary	538.754,42	102.551,63	390	782.000	38
Medical Service- IBS	415.526,32	160.399,79	90.000	750.000	38
Practices Income	4.060.526.30	2.560.356.76	900.000	10.000.000	
Honor in private	5.315.789,50	4.074.344,67	1.000.000	21.000.000	
Husband Income	773.026,32	2.707.087.58	0	15.000.000	38
Costs	3.407.894,70	2.418.552,35	500.000	12.000.000	38

If calculated, the respondents' salary in private hospitals is ten times compared to their salary at central regional hospital (RSUP) X, while the average monthly budget of respondents is IDR. 3,407,894.70.00. It means that it is not comparable to the income from government salaries at central regional hospital (RSUP) X. The results of descriptive analysis about the job satisfaction of respondents consisting of specialist doctors at Central Surgical Installation of central general hospital (IBS RSUP) X gives an illustration that there is no one who is very satisfied with their job at central surgical installation (IBS). 13.2% of them stated that they were satisfied while 73.7% stated that they were slightly satisfied with their work. A total of 2.6% of them expressed very dissatisfied and 10.5% expressed slightly dissatisfied. The condition of the specialist doctor's job satisfaction level is depicted in Table 5.

This phenomenon is quite interesting. Although economically doctors are paid less than their salary and incentives [13], the level of job satisfaction is relatively high. This can be understood because doctors realize that job in government-owned hospitals does not provide economic incentives but provides other incentives, for example, high social status as a lecturer at the Faculty of Medicine or as a pathway to the title of professor [14]. Besides, the government regulation to work double-duty in a private hospital is considered a very pleasant thing [15]. In private hospitals, specialist doctors are paid based on a *fee-for-service* which is much higher than the monthly salary for government-owned hospitals. This state hospital situation is an attractive form of “non-monetary compensation” [16] so they do not move from the hospital. Table 5 shows the level of job satisfaction of respondents.

Table 5. The Level of Job Satisfaction of Respondents

The Level of Job Satisfaction	Score	Frequency	Percentage	Number of Percentage
Very dissatisfied	1	1	2,6	2,6
Dissatisfied	2	0	0	2,6
Slightly dissastified	3	4	10,5	13,1
Slighlty satisfied	4	28	73,7	86,8
Satisfied	5	5	13,2	100
Very satisfied	6	0	0	100
Total		38	100	

The research cases above show that *fee-for-service* is the biggest component in the specialist doctor's salary. Government salaries are very low. This can be a problem in terms of the distribution of time and attention to work. Specialists tend to give time to hospitals that can pay more. Several government-owned hospitals such as those in the previous explanation are trying to improve *fee-for-service.* However, the question is how much rupiah should be given as medical services to satisfy the needs of a specialist doctor?

For hospitals, the compensation given to specialist doctors aims: (1) attract specialist doctors to work; (2) keep the good specialist doctors on the job; (3) increase competitive advantage; (4) motivate specialist doctors to work better; (5) fulfill the legal standards; (6) supports the achievement of the hospital's strategic goals. With these aims, it can be seen that

the compensation for specialist hospital doctors in Indonesia is still not satisfy. This is evidenced by the double work and low income of a specialist doctor from a hospital.

The amount of the monetary compensation in the hospital can be related to the strategy adopted by the hospital. For example, a hospital that wants to move on to high technology and complex cases must be able to compensate a group of specialist doctors so that they are willing and able to work in a team [17]. Without good *team-work*, complex cases and technologies are difficult to be achieved. This could explain why high-ranking officials and wealthy people go abroad for diseases that actually can be overcome in the country. One possible explanation is the existence of good team-work at overseas hospitals.

Compensation in a hospital is related to the external environment and the internal environment. The related external environment is the statutory regulation that determines the amount of compensation. For non-skilled employees, for example, laborers, this is regulated by the regulation regarding the Regional Minimum Wage (UMR). However, there is no regional minimum wage (UMR) regulation for experts. Another related external factor is the standardization of income which is usually set by the *Labor Union* or Professional Association. This does not exist in Indonesia. Until now, there are still only a few of the Association of Indonesian Doctors or the Indonesian Doctors Association (IDI) which determines the standard of compensation for a specialist doctor or general practitioner. Another related external factor is the power market [18].

It is understandable that if the number of specialist doctors is very small, then the authority to set the tariffs or income will be done by the specialists. For example, the number of sub-specialist doctors such as cardiology surgeons, nerve surgery specialty, urologic surgery specialty, orthopedic surgery specialty, and various other specialists is very low in Indonesia. In this situation, the hospital and even the community will not be able to negotiate the amount of compensation with the specialist group. The doctor will be the *price maker* who determines the amount of the *fee*, while the hospital and the community will be the *price taker*.

Internally, the compensation policy must pay attention to various related matters, for example, the work culture of the organization, the hospital strategy, to the future of the hospital. The big difference in compensation between specialist doctors and paramedics and non-medical personnel can damage the work culture of human resources. Compensation that is too large for specialist doctors can trigger nurses to ask for greater compensation than the annual. It can threaten the survival of the hospital. In the government sector, large compensation for doctors can create jealousy for personnel in other government sectors, for

example, local government employees, even the regional head himself. Meanwhile, compensation that is too low can also reduce the morale of specialist doctors, thereby reducing their productivity.

4. Conclusion

The material compensation given to a professional is expected to be able to overcome the necessities of life in the form of food, clothing, transportation facilities, recreation, housing, children's education, old-age insurance, health services, and leave. The big question arises about what is the standard of living for a specialist. For example, in fulfilling the need for a car, what kind of car does a specialist doctor want. In India, there are no many choices of cars. However, in Indonesia, the choices range from cheap cars such as the Timor sedan to the European sedan that costs billions of rupiah, which are the options for specialist doctors. Likewise, housing and recreation options and children's education. Thus, whether the compensation is suitable or not, it depends on the lifestyle of a specialist. This makes it difficult to set standards because Indonesia is not a socialist country. When viewed from the condition of specialist doctors conducting association congresses, the specialist doctor's lifestyle tends to be in the elite sphere. This is inseparable from the history of health care in Indonesia, where doctors have always been associated with the elite in their environment. As an elite group, housing, recreation, household equipment, and cars have certain standards that must be considered in determining the doctor's salary standard.

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