



## Consequences of Performance-Based Payments and Regulatory Schemes from the Perspective of Health Managers: A Qualitative Study

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### Abstract

**Introduction:** The implementation of the performance-based payment scheme sparked a hope that the changes in the payment of financial rewards to employees in a fair manner and based on their performance can increase employees' motivation and job satisfaction. Accordingly, this study investigated the consequences of performance-based payments and regulatory schemes from the perspective of health managers in selected educational and medical centers in Isfahan.

**Methods:** This qualitative study was conducted using a phenomenological approach. The data in this study were collected through in-depth interviews with eleven experts working in the management divisions of hospitals and central offices as well as the staff and faculty members of Isfahan University of Medical Sciences. The respondents were selected using purposive sampling. The collected data were analyzed using the content analysis method.

**Results:** The consequences of performance-based payments were explained by one main theme (the consequences of implementing the performance-based payment plan in the health system) and four subthemes. Besides, one main theme (the general national and professional factors of the health system affecting the regulatory schemes) and five subthemes accounted for regulatory schemes.

**Conclusion:** Payment regulatory schemes should be formulated effectively to address the problems associated with the current payment system so that the establishment of a performance-based payment system can serve as a mechanism to achieve this goal and a basis for reforming the existing payment systems.

**Keywords:** Teaching hospitals, Performance-based Payments, Supervision, Outcomes, Health system, Health managers

### Introduction

Performance is a multidimensional element that explains both the outcomes and the processes that produce the outcomes. To improve employee

performance, organizational managers should take some measures as increasing the ability to attract and retain employees, increasing employee



motivation by providing internal and external rewards, and increasing opportunities by creating a suitable environment for employees to develop individual skills (1).

Given that in hospitals, as in other organizations, human beings play a key role as the main component of the organization and employees are recruited and perform their duties according to government laws, inadequate salaries and inefficient payment systems can lead to problems such as employee dissatisfaction, absenteeism, dismissal, strikes, complaints, and/or other organizational problems. Therefore, the goal of management in the organization is to attract, retain, and develop human resources. To this end, designing a fair payment system is essential for achieving this goal (2).

The human factor is the most important organizational element. Therefore, to get aware of the performance outcomes of human resources in terms of the expected returns, employees working in the organization are evaluated. To this end, employees' weaknesses and organizational problems are recognized and necessary measures are taken to improve the human resources. This also helps managers take effective steps to achieve the set career goals and improve human resource productivity and awareness of the problems. This is important because human resources as a major source of value creation in the organization have a competitive advantage and retaining and motivating employees by using mechanisms such as rewards is one of the most important tasks of any organization. The workers' compensation system which is designed for different purposes aims to establish a fair payment system and a balance of payments and benefits for all employees in a competitive market so that the organization can maintain its effective workforce (3, 4).

One of the compensation plans that is being implemented is the performance-based payment plan whereby each person is paid for what he/she does. The number of patients visited by a physician in the clinic and the number of surgeries done can be used as a measure for payment. Therefore, the relationship between the payment system and individuals' performance may be more important than anything else, especially in organizations where salaries and compensations are determined based on performance (5). The performance-based payment system has been designed and developed in response to the need to move from the old payment system

based on positions to systems that emphasize and value service delivery. Given that failure to reward correct behaviors can lead to wrong outcomes, the lack of a reasonable relationship between work and compensation perceived by employees will directly affect their efforts and activities (6, 7).

Various methods are used in different countries to pay for various health, diagnostic, treatment, rehabilitation, and other services, including seven payment methods: performance-based payments, general funds, per capita funds, reward payment, a global payment system based on the type of disease regardless of the length of hospital stay, daily payments, and fixed salaries. Different performance-based payment methods are used in various countries to guide the activities of the staff working in the educational and medical wards, to increase motivation, and prevent the reduction of service quality in different countries (8, 9).

Rich et al. examined evidence-based decisions at the point-of-care and the role of fee-for-service (FFS) incentives in the United States and found how incentives can distort physicians' decisions about testing, diagnosis, and treatment. The authors highlighted factors that contribute to promoting and impeding evidence-based decision-making using examples from the 'Choosing Wisely' program. They also presented a summary of how the existing fee-for-service payment system in the US may lead to the problems of over- and under-testing, diagnosis, and treatment (10, 11). Raeisi et al. examined fee-for-service payment based on performance in Hasheminejad Hospital in Tehran and concluded that performance-based payments accounted for only 44.6% of payments. Besides, 21.3% of the hospital staff were dissatisfied and the rest were moderately satisfied with the payment system (2).

Given the difference between private and government payments and the low performance-based payments for non-physician staff versus physicians, late and almost identical payments for different occupational groups, and the mismatch between the services provided and payments made, an issue of interest is to identify the consequences of the performance-based payment mechanism and investigate if it can positively affect employees or not. Moreover, it is essential to know the positive and negative effects of regulatory schemes like performance-based payment plans. These questions motivated this line of research to explore the effects

of implementing the performance-based payment plan in its current form and examine its effects and consequences on employees' performance. Accordingly, the present study aims to introduce the performance-based payment system by taking into account the factors related to regulatory plans. Besides, it aims to explore the consequences of performance-based payments in the health system by exploring expert's and health managers' experiences. The insights from this study can be used by health managers and authorities to take the necessary measures to better implement the regulatory schemes and performance-based payments.

### Methods

This qualitative study was conducted using a phenomenological approach. The research setting was the hospitals affiliated to Isfahan University of Medical Sciences and the staff working in the central offices and employees of Isfahan University of Medical Sciences. The research population included the middle and senior managers at hospitals of Isfahan University of Medical Sciences, the staff and faculty members of Isfahan University of Medical Sciences, and officials of teaching hospitals of Isfahan University of Medical Sciences who had considerable executive or academic experiences in the health system, had at least five years of service records in the health system, and were familiar with the performance-based system. The participants were selected using purposive sampling and attended in-depth interviews.

In this study, eleven experts were interviewed, one of whom was a faculty member with management experience in the health system. Two of them were employees with long management experience in the health system and the other eight were senior and middle managers with substantial service records in the health system and health system management. The interviews were conducted in the hospital management offices, university central offices, and faculty rooms. All interviews were conducted based on an interview guide and the participants' voices were recorded by a mobile phone recorder. Each interview lasted 30 to 60 minutes (500 minutes in total). The data collection process continued until the collected data were saturated and no new information and theme were observed upon conducting additional interviews.

The reliability and validity of the data were assessed using four criteria including credibility, dependability, confirmability, and transferability

(Guba & Lincoln, 1989) (12). To check credibility, the interviewer's skill was improved with assistance from the members of the research team. Furthermore, a few pilot interviews were conducted by the researcher before starting the study. Afterward, the first interviews were monitored by two professors to check and confirm the procedures used for conducting the interviews. After making the necessary revisions, the remaining interviews were conducted. Besides, to enhance the dependability of the extracted codes, they were reviewed by some participants and were modified according to their opinions.

The collected data were analyzed using conventional content analysis. In this technique, coding categories are derived directly from the text data. The collected data were analyzed using Colaizzi's seven-step content analysis method including transcribing the interviews, saving the data in the computer, immersion in data, coding, recording reflective cues, recording marginal cues, summarization, and developing the suggestions. In the first step, after each interview, it was transcribed immediately. In the next step, the text of the interviews was read and reviewed several times by researchers to come up with a correct understanding of the participants' experiences. In the third step, the data were broken down into semantic units (codes) in the form of sentences and paragraphs related to the main theme. Semantic units were reviewed several times and then the codes related to each semantic unit were extracted. To this end, the subcategories in each interview were identified separately and then merged and reduced to determine the main theme. In the fourth and fifth steps, reflective and marginal cues, i.e. the ideas and views formed in the researcher's mind during the interviews and data analysis, were recorded. In the sixth step, the codes were classified based on conceptual and semantic similarity and were condensed as much as possible. Finally, the data were placed into the main categories, which are more general and more conceptual, and then the themes were abstracted and suggestions were offered.

### Results

The consequences of implementing the performance-based payment plan in the health system were conceptualized by one main theme (the consequences of implementing the performance-based payment plan in the health system) and four subthemes. Besides, regulatory schemes were explained by one main theme (the general national

and professional factors of the health system affecting the regulatory schemes) and five subthemes.

### **1. The general national and professional factors of the health system affecting the regulatory schemes**

#### *1.1 Political, social, economic, and cultural factors*

The pressures on the management system of an organization on the part of sociopolitical groups and other problems were one of the threats pointed out by some participants. One of the participants highlighted managers' requirement to be accountable before political and social groups (pressure groups or influential persons) and emphasized the difficulty of management in the country due to the existence of these influential groups:

*"In our country, managing an organization is very difficult. Managers must finally be accountable to political officials, members of parliament, and social groups. What can we call these? Can we name influential factors or pressure groups?"* (Participant 2).

Another participant pointed to poor enforcement of laws due to cultural, organizational, political, and social factors:

*"Our laws are too many but not well implemented for cultural, organizational, and socio-political reasons that cannot be discussed here"* (Participant 5).

One of the participants referred to the involvement of economic, political, etc. issues in illegal decisions:

*"There have been many cases where decisions were made without taking into account the rules and instructions perhaps due to economic and political issues or other factors, but there was no supervisory authority to ask them why they were paying in this way"* (Participant 8).

Another participant pointed to the great impact of the national political issues on the service organization of the Ministry of Health:

*"Whether we like it or not, we are involved in the country's political issues. The country's public issues have a great impact on our performance. We are a service organization and we have to provide services, but unfortunately, politics affects our performance"* (Participant 3).

#### *1.2 Support from insurance organizations*

One of the participants suggested that the solution for many problems faced by hospitals is the timely payment of insurance organizations:

*"I think that if the insurance-related problems are solved and insurance compensations are paid on time, hospitals will solve a lot of their problems"* (Participant 10).

Another participant referred to the timely payment of expenses by the insurance companies and the timely collection of compensations by hospitals:

*"The officials in the new government required insurance companies to pay fairly and on time so that the health system can receive revenues on time. I think a supervisory board can help this happen"* (Participant 10).

Referring to the same issue, another participant believed that the systematic and professional performance of the Ministry of Health and also the involvement of the parliament, the insurance organization, and the Ministry of Welfare to raise payments (effective and systematic planning of the Ministry) can solve the great challenge of under-the-table payments:

*"The minister intervened very effectively for the under-the-table payments. Although it was a very big challenge, the minister did a good job and acted systematically and professionally to implement the plan. He involved the parliament, insurance companies, and the Ministry of Welfare to raise the payments. He did a systematic work and has taken steps to systematize payments"* (Participant 5).

#### *1.3 Medical equipment companies and institutions*

One of the participants referred to the existence of a monopoly culture in the health system and the fact that all companies with MRI machines face maintenance and repair challenges:

*"Companies that have MRI machines in Iran face challenges because a specialist has to work for a couple of years to be able to provide services and thus his/her position is monopolized. Now, many companies holding MRI machines are facing some challenges"* (Participant 5).

Another participant pointed to the issue of supplier-induced demand (SID) by the physician in the discussion of medical equipment:

*"Despite the requirement that equipment should not be supplied from outside the hospital, some physicians tend to prescribe equipment and devices that are not used by patients and they only take them everywhere they go"* (Participant 3).

#### *1.4 National executive and supervisory systems*

One of the participants mentioned that there are



many violations committed in the country but they are left untreated:

*“There are many violations and crimes committed in our country but they are left untreated due to the weakness of the supervisory system”* (Participant 9).

Another participant highlighted the existence of many unlegislated laws in the country that are currently applied (as if they are enacted laws):

*“A thing to note is that we are living in one of the few countries where there are a lot of unwritten laws. I heard one of our experts said that, unlike other countries, we have several unwritten laws that are being executed as if they are approved laws”* (Participant 5).

### 1.5 Insurance organizations

One of the participants stated insurance organizations, especially the Social Security Insurance Organization strictly monitor doctors' bills:

*“But there were some organizations that were strict on insurance payments especially the Social Security Organization, whose experts strictly supervised insurance bills”* (Participant 4).

Another participant pointed to the inability of the insurance organization to deal with a radiologist's violation for overcharging patients in public hospitals as an example and attributed it to the hospital's failure to deal with physicians' violations due to lack of support from senior managers and high prices of the private sector:

*“A radiologist did not agree to do his services in a public hospital because he had to complete his K-coefficient services in a deprived area. He agreed to attend the hospital one day a week and provide ultrasound services. Sometimes the person (radiologist) threatened not to come to the hospital. Well, the authorities were forced to agree that he would work in the hospital with the private sector pricing rate. They said that they would provide the space and facilities so that he could take an ultrasound with his own device as the hospital did not have one. He used to take the portable device with his car and received private sector bills for his ultrasound services. Clients had no choice but to pay this high price. But the only authority that resisted such unfair treatment was the insurance organization”* (Participant 4).

The consequences of performance-based payments were explained by one main theme and four

subthemes. The main theme accounted for the consequences of implementing the performance-based payment plan in the health system.

### 2. The consequences of implementing the performance-based payment plan in the health system:

#### 2.1 An increase in the number of occupied beds

One of the participants pointed to the increase in the number of occupied beds as one of the consequences of implementing the performance-based payments guidelines:

*“As you know, one of the consequences of this new system (the performance-based payment plan) was the increase in the number of occupied beds”* (Participant 2).

Another participant pointed a temporary increase in the number of occupied beds as a result of implementing the new system:

*“The only outcome was an increase in the number of occupied beds just for a temporary period”* (Participant 9)

One of the participants also stated that physicians were willing to work full time in the hospital and close their office as the K-coefficient for services was doubled:

*“It makes sense. Under the new law, physicians are interested in closing their offices and working in hospitals as they are paid twice as much. If they close their offices, they can work full time in the hospital and they are paid well. I talked to three or four doctors and they said they wanted to close their offices”* (Participant 7).

One participant pointed to the Ministry of Health's policy for a gradual increase in physicians' performance-based payments, increasing physicians' motivation, and improving their performance in public health centers:

*“The hospital pays and physicians' performance-based payments are calculated based on physicians' fees (using the formula for calculating performance-based payments)”* (Participant 6).

#### 2.2 Increasing the supplier-induced demand (SID)

One participant pointed to an increase in the supplier-induced demand (SID) as a consequence of the application of a performance-based payment scheme:

*“The performance-based payment scheme has*

*increased the induced demand for services” (Participant 2).*

Another participant referred to the SID for medical equipment and an increase in unnecessary services:

*“Sometimes the doctor prescribes medications and services that are not necessary for the patient but the patient has to follow the doctor’s advice” (Participant 3).*

One participant stressed that fee-for-service is not a good way to pay for medical staff due to quality issues:

*“Fee-for-service for medical services is not a very good method. In fact, it is one of the most elementary payment methods for medical services. It is not acceptable because of quality issues. They say if we just focus on the quantity of services, then there will be no place for quality” (Participant 5).*

### *2.3 Reducing the quality of education in teaching hospitals*

One of the participants pointed to reducing the quality of residents’ education in the new payment system:

*“When the quality of education is slowly declining, what is the use of increasing the number of occupied beds? In the education system, you have to deal with many cases to improve the quality of medical education” (Participant 9).*

### *2.4 Damage to health organizations*

One of the participants stated that the health organizations suffered from losses due to the failure of the project:

*“In fact, this plan aims to motivate and involve people in treatment to motivate medical staff. For example, higher involvement increases the revenues of hospitals so that the hospital can be run more efficiently. The plan has not been successful yet. We are seeing the damages” (Participant 4).*

## **Discussion**

This study examined the consequences of implementing the performance-based payment plan in the health system and general national and professional factors of the health system affecting the regulatory schemes. The results showed that the difficulty of exercising management in the country due to political, economic, and social issues, non-coverage of some services by the insurance organization, the existence of a monopoly culture

in medical centers by medical equipment companies and institutes, prescription of unnecessary services by physicians, the existence of many unapproved laws, and failure to deal with violations were some threats affecting the implementation of regulatory schemes in the health system. Besides, the opportunities of implementing performance-based payment plan in the health system were regulatory plans and decisive action of the insurance organization, especially the Social Security Insurance Organization, with violations committed by physicians. The results also showed that the consequences of the performance-based payment plan include an increase in induced demand for medical equipment and unnecessary services, a decrease in the quality of education in training hospitals, losses suffered by health organizations in the new payment system, and a temporary increase in the number of occupied beds in the implementation of both regulatory schemes.

Keyvanara et al. showed that the healthcare-induced demands can be initiated by physicians, patients, third parties, or all of them (physicians, patients, and institutions). The main role of physicians is to determine the path of treatment that can induce demand for medical services intentionally (to earn more revenues) or unintentionally (due to lack of knowledge, experience, and skills) (13, 14). Nemat Bakhsh et al. concluded that faculty members of a medical school were not aware of the content of the performance-based payment plan. Furthermore, more than 60% of the respondents stated that implementation of the plan did not increase the engagement of professors in the required educational activities. According to 65% of the respondents, the implementation of this plan did not increase the participation of clinical professors in educating trainees, interns, and assistants (15). These findings were consistent with the results of the present study concerning the consequences of implementing

the supervisory and performance-based payment schemes. Furthermore, the results of the present study concerning induced demand for medical services were in line with the observations made by Keyvanara et al. One reason for induced demand can be lower payments for medical services in the public sector compared to the private sector (13). As long as the difference in service prices between the public and private sectors is large and the payment system does not change from performance-based payments to per capita payments, there will be an increase in induced demand for medical services by the service provider

in the health system. Besides, the present study highlighted a decrease in the quality of education. This finding was consistent with that of the study by Nemat Bakhsh et al. who showed that the performance-based payments scheme does not increase the quality of education among physicians (15). Accordingly, it can be argued that lower payments and the engagement of professors in both the public and private sectors have reduced the quality of education. Hence, monitoring the performance of medical staff, delegating authority to determine prices for medical services, modifying tariffs, and paying attention to financial differences can be used as levers to increase the quality of education provided for clinical staff.

Bahadori et al. studied the challenges of supervision on providing health services from the viewpoint of the insurer and concluded that the health system needs to pay attention to regulatory issues. They also argued that monitoring and attention to technological, economic, and value opportunities and threats in making policies to monitor service providers are essential strategies for the health sector (16). These findings are partly consistent with the data in the present study. Bradley et al. found that there were differences in district health managers' perceptions of supervision in Malawi and Tanzania. In Malawi, there was more supervision at the Control and Inspection Center; while in Tanzania, supervision was provided with support and improvement (17). These findings were in line with the results of the present study. This study also showed that exercising management control in the country was difficult due to economic and value factors. This finding was partly supported by a study by Bahadori et al. (16), but it contradicted their findings on

other monitoring strategies. Economic issues and problems affect the implementation of such regulatory schemes. Under normal economic conditions, fair payments and attention to values would lead to the effective implementation of such schemes. Furthermore, as pointed out by Bradley et al. (17), supervision should be focused and centralized to improve services.

Recent studies in the United States have suggested that performance-based payment plans across the country are guaranteed by a variety of health care and public insurance programs that exceed 100 cases (18, 19). These studies highlighted the weakness in the structure of the plan and the need for more supervision to address problems and more effective implementation of the plan, as was observed in the present study. Studies in the United States have

suggested that there was a need for supervision and strengthening the structure of performance-based payment plans. In contrast, the present study showed that the implementation of the performance-based payment plan causes damage to the health organization, increases induced demand, and reduces quality. These contradictory results can be attributed to the different nature and conditions of the two countries, Iran and the United States, in the health sector and the implementation of payment plans and organizations that independently monitor such plans.

Most American physicians and hospitals now favor performance-based payments as a motivational plan. They stated that compensating the service providers and improving the quality of services provided is a primary goal in these plans and other goals are controlling costs directly and indirectly by reducing errors and excessive use of services (20, 21). The results of studies conducted in many organizations have shown that the advantages of this payment method outweigh its disadvantages. Even if this method is not directly motivating, because success will be determined through tangible tools, it indirectly motivates and conveys the message that great performance is very important to the organization and should be rewarded. In general, performance-based payments increase employee motivation to better perform tasks and develop competency, showing the importance of employees' performance and competence and ultimately a fair payment system based on performance and participation of people in many organizations (22-24).

Payment regulatory schemes should be designed to address the problems of the current payment system. Accordingly, the establishment of a performance-based design system can be used as a mechanism to achieve this goal and reform the payment system because the relationship between payment and performance is more effective when it is used to build the performance aspects that are under employees' direct control and influence. Although there are several challenges to implementing regulatory schemes in the health system, effective implementation of these schemes can have positive controlling effects and reveal and prevent violations in the health system. These findings help health policymakers take into account the threats and opportunities in the regulatory schemes and the positive and negative consequences of such schemes, to develop effective strategies to monitor and implement the new performance-based payment plan.

The results obtained from qualitative research are often expressed on a case-by-case basis and their validity is correct in the context of the subjects. The present study was conducted in Isfahan University of Medical Sciences and the results obtained cannot be generalized to all universities and disciplines.

## Conclusion

Considering the main principles of economics and health management, the requirements in the health sector and the share of direct and indirect payment of health costs by health care recipients, regulatory schemes and performance-based payment plans should be assessed carefully to reveal their weaknesses and make the health system more efficient in line with people's needs. Besides, paying attention to issues such as monitoring the performance of medical and non-medical staff, dealing with violations influencing payments, delegating authority in determining performance-

based payments, modifying prices, paying attention to financial differences, monitoring financial issues, organizational support from insurers, and providing transparent instructions and powers can help to better implement the performance-based payment plan and regulatory schemes. Future studies can further investigate the new hospital management system and the performance-based payment plan and their supervisory boards.

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## Conflict of Interest

The authors declared no conflict of personal and organizational interests.

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