Survey the Process of Collection and Turnover of Receivables, Yearly Budget Laws in Health Sector

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A-B-S-T-R-A-C-T

Background & Aims of the Study: The evaluation of financial performance is one of the main tasks of the manager that is very important. Any decision-making and rational planning in order to increase the productivity and survey the effect of adopted decision on the organization performance is in relation to the accurate assessment of financial performance. The aim of this study was to investigate the process of collection and turnover of receivables and rules of hospital budget in Qom University of medical sciences during the fourth and fifth development plans.

Materials and Methods: This is a descriptive-analytic and cross-sectional study. It was used from researcher-made forms for collecting data. The data after collection from financial filing unit entered to the excel software and then the period of receivables collection, circulation of receivables, average daily sales and average intake accounts were analyzed, using activity ratios formula.

Results: Our findings show that during the fourth and fifth development programs, the turnover of receivables decreased from four times to three times in the year and it is less than the least standard that is five times in the year. The period of receivables collection increased from 72 days to 147 days and it is more than the maximum standard that is 67 days. This issue is the indication of bad situations of insurance companies of under-contract with hospitals in paying of their obligations during study period.

Conclusion: The period of collection and turnover of receivables of selected hospitals takes distance from the standard amount that needs to intervention at the macro level of decision-making. This study showed that resorting to legal leverage over the fourth and fifth development plan have not any impact on the improvement of reimbursement process. Therefore, the practical action of politicians about reformation of insurance's structure and review of the ways of financing can be effective.

Background

Hospitals are the most important component of health systems in developing countries that about 50% - 80% of health cost is related to them(1). Hospitals in the health care system of the country are very serious parts, have very heavy responsibility. Providing and ensuring of society health is depended to proper and responsible function of the hospitals. Hospitals, like any other organization require continuous monitoring and evaluation. Hospital performance can be measured by analyzing the results of monitoring and comparing with the standards(1).

Evaluation of the financial performance of the organization is one of the most important tasks of the managers, because the field of rational decision-making and planning in order to increase productivity and the effect of decisions adopted by the organization's performance provides by it(2). Analysis of financial statements allows the external and internal

decision makers to obtain an overview from the health and conditions of their organization. Most managers have to recognize the capacity and opportunities that may be desirable and also must determine the weakness that needs correction (2).

Due to the accomplishment of self-financing plan of hospitals, the importance of this action is more apparent. Insurance companies are the most important centers in the hospitals financing.The bulk of the income of hospitals with the expansion of public insurance plans, paying of the franchise by patients and the greater share of the services provided by the insurance were shifted to the insurance companies (3). Nowadays, for various reasons insurance companies that are considered as the major customers of medical centers due to the delay in paying which they debt to the hospitals increased the collection period. This issue leads to existence of some difficulties in paying to the personnel, medicine and equipment centers and can have a negative impact on services (4). In the current economic conditions, paying attention to the liquidity and the present value of it in the economic activities is very important (5). In addition, health care costs are payable when each of the participants should have a financial participation in its implementation, be able and want to pay the financial payments. In the analysis of organizations, the ability and willingness to pay are more important than the cost of economic. If the funds required for the implementation of a program does not provided, or its suppliers be delayed, the effectiveness of the program is seriously threatened (6).

Receivables turnover is an important criterion for assessing of liquidity that shows how fast the receivable accounts changed to the money. Receivable accounts are resulting from deferred sale (credit) and its turnover sometimes is depended to the sale's duration (7).

The period of receivables collection is a criterion for measuring the needed time for collection of pecuniary receivable that is from

the sale of credit to the customers. The period of receivables collection indicate the efficacy of profited unit in the collection of fund related to the credit (deferred sale) (8).

Since the public hospitals are the only health care providers with the public tariffs for insurances, the use of various leverage for decreasing the period of receivables collection can leads to the profitability of hospitals (By increasing incentives for doctors and medical staff), because, insurance companies haven't alternatives for their covered patients who complied with the public tariffs. Although, the relatively long collection period (in the industry) is not necessarily a negative phenomenon because severe rigor in the rapid receivables collection could lead to lower sales, but this issue is different in hospitals in comparison with industries (8).

Prolonged period of receivables collection in hospitals and in other hand, the low frequency circulation of receivables collection is caused the public hospitals as a provider of health care services encounter to the serious problems in reimbursement of debts to the personnel, pharmaceutical and equipment providers companies. Even they sale their drugs to the hospitals by cash and limit their credit sales. They resorted to borrowing loans from the banks to rescue themselves from these problems (4). Dependency of public hospitals to the general government fund in one hand and the governmental nature of the insurance companies in other hand, created a cycle that caused the interrelatedness of problems (4).

There is a significant inverse relationship between the cycle of cash conversion and profitability of companies so that managers can reduce the cash conversion cycle and its components to increase the profitability of companies reasonably (9). To this aim, the Ministry of health and medical education in line with health society reformation, official reformation in this section and to enhance the management and utilization of resources in medical schools and national health services,

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has attempted to reform financial system of this ministry. The first steps were reformation of accounting system and changing the cash accounting to the credit accounting in order to provide an adequate financial data for decision-making about the management and composition of finance and funds (10).

Up to now, there are little researches about the calculation of the period of receivable collection in health sector and especially hospitals of Iran. Nasiri Pour et al (2012) accomplished a study at the University of Medical Sciences of Iran with the title of analysis of the financial statements of universities; they used questionnaire in the descriptive cross-sectional method (2). Ebadi Fard Azar et al (2011) accomplished a study in Qom University of Medical Sciences under the name of period of receivables collection, receivable cycling in descriptive method. (4). Abdul Raheman and Mohamed Nasr (2007) accomplished a study in Pakistan about the management of circulating funds and profitability in international business units of Pakistan by descriptive cross-sectional method (11). A study was accomplished by Michello and Wanorie (2015) about the impact of circulating fund management on profitability of health care centers between 2009 and 2013 (the years following the financial crisis in the US) by cross-sectional method (12).

Bennet and selvam (2009) accomplished a study about the evaluation of relationship between circulating fund and profitability of shared companies in 14 samples of shared hospitals in India (13). Another study was accomplished by Ozgulbas and Kisa (2006) in Turkey by the title of wasteful (extravagant) in general hospitals affiliated with the government and supervised by Ministry of health (14). A study was accomplished by Plante (2009) in California by the title of difference between profited and non-profited hospitals in 24 profited and non-profited hospitals by descriptive method (15). Rauscher and Wheeler (2008) accomplished a study about the title of

the management of efficient income of hospitals in California in 2004 to 2006 (16). The results of supra-mentioned studies will be discussed in the part of discussion.

Aims of the study:
Since excessive investment in the receivable accounts (lack of timely collection of receivables) decrease the profitability of companies and institutions (17), this study is accomplished by the aim of survey the process of collection and circulation of receivables, yearly budget laws in selected hospitals of Qom University of Medical Sciences during the fourth and fifth development plans.

Materials & Methods

The study population in this study is all of the educative-therapeutic hospitals affiliated with the Qom University of Medical Sciences of Iran. Under-studied population or sample in this study is the center of Kamkar-Arabnia hospital of Qom, Iran. This study is accomplished by the non-probabilistic sampling method and these samples are selected by available or provided sampling. This is an observational-descriptive study that was performed based on existing data. The aim of the researchers in this study is only the further recognition of existed situation to assist decision-making process at the executive and planning levels (18).

Data collection tool was researcher-made forms that were designed for research objectives. The data used in this study were related to the financial documents of Kamkar-Arabnia hospital of Qom that was available in the financial archives of this center. These data were confirmed annually by monitoring and auditing systems so, they had high credibility and validity.

This study was performed by survey the study literature and other under-studied parts in library which were referred to the reports, various documents, internet, English sources and study of various articles.

Data analysis:

Data analysis was carried out in three stages. First, all data manually extracted from the financial archive of this center and they are recorded in the pre-designed forms. Then they were entered in excel software. Finally, the data were extracted by use of accounting formula in the field of activity ratiocalculation. Receivable turn over, daily receivable accounting and receivable collection period of this center were calculated during 2005-2013 and the results are mentioned in the next parts.

Results

The results of this study in Table 1 show that generally, receivable turnover between all of the insurance companies during the study time decreased and take some distance from the standards. So that, the health services insurance in the first year of study (2005) had the receivable turnover of 3.91 times in the year while in the final year of study (2013), this number decreased to the 1.42 times per year. Receivables turnover shows that how quickly the receivable accounts convert to the cash that the achieved results showed the existence of non-desirable situation. Also, the social security insurance in 2005 had the receivable turnover of 4.04 times per year. While in 2013, this number has been reduced to 2.51 times per year. Insurance Committee of Imam Khomeini in 2005 had the receivable turnover of 10 times per year while in 2013, this number has been reduced to 4.13 times per year. Armed force insurance in 2005 had the receivable turnover of 4.80 times per year while in 2013, this number has been reduced to 1.95 times per year.

The results in Table 1 show that generally, during the study period, the receivable collection period increased in all insurance companies and take some distance from the standards. So that, the health services insurance in the first year of study (2005) had the

receivable collection period of 93 days while in the final year of study (2013), this number increased to the 170 days that the achieved results shows the existence of non-desirable situation.

Because, the receivable collection period shows that how many days after the credit sale, the receivable documents are converted into cash. Also, health services insurance in the first year of study (2005) had the receivable collection of 90 days while this number increased to 145 days in 2013. Insurance Committee of Imam Khomeini in 2005 had the receivable collection of 35 days while in 2013 this number increased to 88 days. Armed force insurance in 2005 had the receivable collection of 76 days while in 2013, this number increased to 187 days.

Discussion

The achieved results in Table 1 shows that the receivable turnover was averagely 4 times per year in the fourth developmental plan and averagely 3 times per year during the first to third years of fifth developmental plan that is lower than the least standard in the industry (five times per year) (2). Moreover, the receivable collection period in the first year of fourth developmental plan and in the end of this plan; also in the third year of fifth developmental plan were averagely 72, 136 and 147 days, respectively that had an ascending trend; so, it is more than the standard (67 days). These conditions are not satisfactory for the hospitals.

In the results of the study of Nasiripour et al (2012) can be seen that the mean receivable collection period of country was 14 days (minimum 14 days and maximum 492 days) (2).There is 33 days difference with the average results of this study in the third developmental plan (147 days). It means that the achieved receivable collection period from this study is more than national average (114 days) and is lower than the highest amount in the country (492 days).

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Table 1) The comparison of turnover and process of receivable collection period in selected hospitals of insurer organization

Receivable collection turnover			Receivable turnover			Average receivable accounts	Average daily sales	insurer organization
Desired status of organization	Industry standard	present situation	Desired status of organization	Industry standard	present situation			
		93.36			3.91	3146801	33707	2005	
		86.20			4.23	3703593	42965	2006	
		87.29			4.18	4587081	52553	2007	
		92.77			3.93	5564897	59985	2008	health services insurance
low	67	130.68	high	5.4	2.79	9170684	70177	2009
		133.32			2.74	12275292	92073	2010
		107.45			3.40	13425639	124945	2011
		130.60			2.79	21890869	167613	2012
		170.85			2.14	34394618	201315	2013
		90.45			4.04	1644918	18186	2005
		89.99			4.06	1960592	21787	2006
		98.78			3.70	2837289	28724	2007
		109.29			3.34	4009941	36692	2008	social security insurance
low	67	149.21	high	5.4	2.45	7939797	53214	2009
		148.01			2.47	10098286	68228	2010
		144.42			2.53	12804447	88664	2011
		143.13			2.55	17930991	125275	2012
		145.13			2.51	22738810	156679	2013
		35.42			10.31	214089	6045	2005
		27.18			13.43	223232	8213	2006
		28.20			12.94	328925	11663	2007
		68.97			5.29	372,1056	15317	2008	Insurance Committee of Imam Khomeini
low	67	120.44	high	5.4	3.03	1956105	16242	2009
		122.81			2.97	1794483	612,14	2010
		92.97			3.93	1384798	14895	2011
		71.85			5.08	1362846	18968	2012
		88.43			4.13	2122365	24000	2013
		76.03			4.80	300635	3954	2005
		82.39			4.43	394662	4790	2006
		95.90			3.81	572481	5969	2007
		85.37			4.28	603532	7070	2008	Armed force insurance
low	67	119.97	high	5.4	3.04	1065699	8883	2009
		149.08			2.45	1441474	9669	2010
		115.6			3.17	1130157	9823	2011
		141.74			2.58	245,1699	11988	2012
		187.38			1.95	2605582	13905	2013

In the study of Ebadi Fard Azar et al (2011), the achieved results for receivable collection period in the first year of fourth developmental plan and final year of fourth developmental plan were 73.5 and 130 days, respectively that is congruent with the results of this study.

The problems of low receivable collection turnover and high receivable collection period for under-studied hospitals are congruent with the results of Abdulraheman and Mohamed Nasr study (2007) about an inverse and significant relationship between the cash conversion cycle (receivable turnover period and receivable collection period) and profitability of companies (11).

The results of Michello and Wanorie study (2015) about the impact of management on the circulating fund on the profitability of health care provider centers showed that the management of circulating fund had a significant impact on the profitability of health provider centers such as managed health

provider organizations, nursing home, providing home care centers and hospitals (12). Also, the results of Ozgulbas and Kisa (2006) in Turkey showed that the hospitals of the Ministry of Health in Turkey haven't professional management for their financial situation and financial resources are not effectively used in the hospitals. Hospitals have difficulty in collecting receivables and returning funds (14).

The results of the study of Plante (2009) in California showed that profitable hospitals had very good management on their cash circulation. Non-profitable hospitals have more income and profitable hospital have lesser expenses. Therefore, the profitable hospitals act are more efficient because they are expending lesser. Also, the profitable hospitals can earn more income from the available resources (15).

All of above-mentioned factors are the indicator of the importance of circulating fund management as a centralized strategy on the effective monitoring on the current assets and current liabilities to be able to ensure from the adequate cash circulation in the hospitals in order to pay short-term obligations and ongoing cost of operations (12).

Low receivable turnover and high receivable collection period led to the serious financial problems in the selected hospitals that show the importance of circulating fund and its consistency with the results of the above studies.

Conclusion

Decline of receivable circulating period and increase of receivable collection period during the fourth and fifth developmental plans is the indicator of not availability of adequate situation for implementation of law and its legislations related to the insurance receivables. Because on the basis of the law of all health care insurance organizations, all of them must pay about 60% of sent bills from the contracted

hospitals before the evaluation as on account and must pay other receivables of health care organizations as well as up to three months after delivery of relevant documents to the official representative of the fund. In the case of non-execution of this clause, the insurance company obliged to supply losses (19). This legal provision that is repeated from 2006 to 2012 in the annually budget law is the indicator of legislator's behavior during the study time with current problem. Although, recourse to legal leverages in the fourth and fifth developmental plans hadn't any influence on the improvement of payment process of insurance companies to the hospitals. Also, No fee was paid as the provisions of the loss by the insurance companies to hospitals. It can be said that legislation cannot only be very efficient in this regard.

It is suggested to the decision-maker authorities to provide an appropriate financial plan and modify the insurance company's structures in the health sector and also, senior managers of insurance companies place the cost management and strategic procurement as their priority.

Footnotes

Conflict of Interest:
The authors declared no conflict of interest.

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