Evaluation of Performance of Ayatollah Kashani Hospital, Tehran, based on Malcolm Baldrige Model, 2006

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Abstract

Background: Aimed to systematic self-assessment, with main performance criteria, Organizational Excellence Models make it possible to evaluate performance of Health Care Sector within a fundamental and systematic framework, leading to development of management skills in the field of performance evaluation.

Objective: This study was designed and conducted with the aim of evaluation of performance of Ayatollah Kashani Hospital, Tehran, based on Malcolm Baldrige Organizational Excellence Model.

Methodology: Malcolm Baldrige Model is constituted of two parts: Process Evaluation criteria and result evaluation criteria. For evaluation of performance of processes of the hospital, 13 secondary process criteria, based on four factors of "Approach", "Deployment", "Learning", and "Integration" were used, and for evaluation of performance of results of the hospital, 6 secondary result criteria were used based on four factors of "Performance level", "Rate and breadth of performance improvement", "Comparative and Benchmark Data", and "Relevance of evaluation results scales".

Findings: The hospital studied in 2006 obtained 231.35 scores out of total 550 scores for process criteria and 111 scores out of 450 scores for results criteria. In sum, the hospital obtained 347.35 scores out of 1000 scores of the model as its performance score in 2006.

Conclusion: Evaluation of performance of the hospital based on Malcolm Baldrige Model provides a continuous and systematic self-assessment, facilitating organizational learning and improvement. Using appropriate criteria, process performances, and various results, this model excludes the hospital from qualitative judgments, replacing them with quantitative measurements. In fact, systematic performance evaluation based on Baldrige Model enables each hospital to continuously be informed of all inputs, outputs, system components, processes and feedbacks. Using this model in our country makes it possible to compare performance of various hospitals inside and outside of the country.

Keywords: Performance, Evaluation, Hospital, Organizational Excellence, Malcolm Baldrige Model.

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Introduction

Regardless of their extent or wealth, in all countries, public health and provision of health care services are considered important and health care providers try to render their services at the highest quality level, considering available resources (1).

On the other hand, due to nature and extensiveness of services rendered in Health Care Sector, occurrence of any mistake, although partial, can be irrecoverable. Thus, it is necessary to evaluate performance and provide flawless services in compliance with performance standards in this sector (2).

In past, performance of health care organizations was evaluated through caring indices and quality of services was ensured only by technical knowledge of medical and nursing professionals, but today, health care organizations are complicated organizations that need strong support by management in the field of performance evaluation (3).

Complication of current health care organizations, increasing health care expenses, specialism, customer-focus, and importance of efficiency and effectiveness of services, all are factors encouraging health care organizations to develop performance evaluation and use organizational excellence model (4).

Using excellence model in health care sector leads to involvement of various specialists in analysis of and agreement on how to change complicated health care organizations and develop management skills in the field of performance evaluation (5).

Performance evaluation system prevailing in complicated health care organizations, especially hospitals, in developing countries could not satisfy its shareholders and encounters insufficiencies in such fields as performance improvement, quality improvement, satisfying health care providers and receivers, improvement of information management system (6).

Today, in developing countries, hospitals are encountering many problems such as overcrowd of patients in wards, long waiting lines, weakness and deficiency in providing health care services, inadequate medications and medical materials and equipment, inadequate and unusable therapeutic and diagnostic equipment, undesirable morale among personnel, inappropriate and decaying equipment on one hand, and weakness in management of performance monitoring and evaluation cause such problems on the other (7).

Currently, hospitals of the country in public and private sector are influenced by intra-organizational factors, so that performance of hospitals in public sector suffers from complicated organizational structure, many administrative regulations, concentrated decision-making, inappropriate budget processes, limitation of powers of management in financial and personnel decisions, resistance to change, loss of competition in public sector, and existence of incomplete and sometimes unrealistic information. While hospitals in private sector are influenced by objectives of shareholders, profitability, and return on capital; and in order to respond shareholders, management evaluates efficiency

of personnel and available resources, which yields "profit" and its "maximization" at the end of evaluation cycle (8).
Factors such as public policies, economic, social, and cultural condition, technological changes, condition of service providers, and change in preference of clients also have a great influence on performance of hospitals (9).
In addition to the above factors, in a study of World Bank (10), five fundamental and logical reasons has been suggested for addressing performance in health care sector and quality improvement, which include: Customer satisfaction and preservation, equal access to health care services, efficiency and effectiveness of provision of health care services, elimination of differences in service provision process, and expensiveness of health care services.
All of the above factors demands sensitivity and necessity of performance evaluation in a fundamental and systematic framework to respond to problems of hospitals in addition to supply them with quality.
Using quantitative performance criteria such as cost-benefit, cost-efficiency analysis and also productivity effectiveness, efficiency and etc. can not respond to the needs and problems of the hospitals and for performance evaluation, a comprehensive model is needed for performance evaluation, so that hospitals can be continuously, comprehensively and systematically evaluated in all fields and units based on main performance criteria (11).
For this purpose, by providing main performance criteria, with the aims of systematic self-assessment, evaluation of the organization in a logical manner at macro and micro levels, providing comparison with other organizations of similar and different nature, providing participation of the people at all levels, establishment of common language for managing the organization, identification of improvement fields and training on organizational excellence concepts and how the people communicate with their responsibilities, organizational excellence models makes it possible to meet the needs and remove problems of hospitals and move towards quality improvement and organizational excellence (12).
Among organizational excellence models, by providing health care criteria, Malcolm Baldrige Model provides an appropriate framework to develop and manage quality systems in health care organizations (13).
In their study titled "Experimental Study of Scientific Relationships in Experimental Criteria in Baldrige Health Care Model", Mira and Collier (14) investigated if Baldrige 7-fold criteria were appropriate model for health care organizations, and concluded that Baldrige Theory with sub-criteria was confirmed as an appropriate model for health care organizations.
While in a study titled "How Quality Improvement Plans can Influence Performance of General Hospitals", Nave and Stern (15) found that quality improvement plans did not lead to total change in performance of hospitals and quality improvement was achieved only at procedural level because many procedures and instructions had not direct influence on performance of hospital

(e.g. surgery complications) and, on the other hand, the more criteria is used for quality management, the more increased quality is achieved at procedural level.
On the other hand, in a study titled "Validation of Baldrige Model in Self-assessment of Organization", Panir Solvam (16) found that Malcolm Baldrige Model could be used in determining quality at organizational level and found it as an appropriate tool for organizational self-assessment.
Also, some studies have been conducted on winners of Malcolm Baldrige Prize. For example, in a study titled "Relationship between performance framework and deployment of Malcolm Baldrige Model Using Profitability Ratio Theory", Davis (17) dealt with managers' attitude based on financial indices for increased return on capital, increased commercial share, increased profit and cash flow, increased return on assets, decreased expenses of customer guarantee and low expenses of deployment of Malcolm Baldrige Model as an appropriate model for achieving success in production and profitability, and concluded that financial performance is the most strong judgment considered by managers for application of Malcolm Baldrige Model. Results obtained from studies suggest that Malcolm Baldrige Organizational Excellence Model ensures success of the organization through continuous evaluation of the organization and determination of challenges and organizational improvement fields and provides the organization with quality through concomitant increase characteristic (18). Since results obtained from provision and application of excellence, quality models has not been considered in our health care organizations, the researcher decided to address performance evaluation resulted from application of this model, which has a separate version for health care organizations.

Method

In this study, which is a descriptive-sectional study, performance of the hospital under study has been evaluated based on criteria of Malcolm Baldrige Models.
Subjects of present study is personnel of Ayatollah Kashani Hospital, Tehran, who were evaluated based on 7 criteria of leadership, strategic planning, focus on patients, health care customers and markets, information measurement, analysis and management, focus on personnel, management of processes, and results of organizational performance.
In this study, sampling was not performed and only subjects of hospital were studied.
Data were gathered using 20 performance evaluation questionnaires of Malcolm Baldrige Model that included:
1 questionnaire for organizational description, which was not included in scoring system;
13 questionnaires for process evaluation of organizational performance;
6 questionnaires for evaluation of results of organizational performance.
Each questionnaire consisted of two parts: criteria framework and criteria measurement factors. For criteria framework, there was no significant difference

among questionnaires, but process criteria measurement factors were different from results of organizational performance, so that process criteria were measured based on 4 factors of procedure, deployment, learning, and integrity, and results criteria were measured based on 4 factors of performance level, comparative and benchmarking data and relationship between scales and results.
Each of 4 factors of procedure, deployment, learning, and integrity ranged from 0 to 100 and were divided into 6 parts including (0-5%), (10-20%), (30-40%), (50-60%), (70-80%), (90-100%), which indicates existing condition of each process criteria based on 4 process measurement factors.
As before, each of 4 factors of performance level, extensiveness and extent of performance improvement, comparative and benchmarking data, and relationship between scales and results were scored from 0 to 100, which indicates existing condition of each results criteria based on 4 results measurement factors.
Considering that Malcolm Baldrige Model has universal quality class, we can say that questionnaires of this model are valid for subject of this study. This is necessary to note that these questionnaires are complete and accurate models of Malcolm Baldrige Model for health care sector.
In this study, considering that this model was a practical sample for health care sector, and especially hospital, all data required for criteria and their key relationships were determined carefully and correctly, and data auditing was performed based on existing evidences.
In this study, data was gathered in a field manner through gaining access to objective evidences and documents. All objective evidences and documents were gathered in a systematic manner based on Baldrige Model Questionnaires and responding to fields determined in 13 secondary process criteria and 6 secondary results criteria.
Data was analyzed in two stage using process criteria and results of organizational performance, in such a way that organizational process data were scored based on 4 measurement factors of procedure, deployment, organizational learning, and integrity. The score obtained by each process criteria indicated current performance of the hospital for concerned criteria and finally performance of the hospital was compared and analyzed by model based on above-mentioned four factors.
On the other hand, organizational performance results data were scored based on 4 measurement factors of performance level, extensiveness and extent of improvement, comparative and benchmarking data, and relationship between result scales. The score obtained by each results criteria indicated results of performance of the hospital for concerned criteria and finally results of performance of the hospital were compared and analyzed by results of model based on above-mentioned four factors.

Findings

For process performance evaluation, Ayatollah Kashani Hospital could achieve: 48.75 points out of 120 points assigned to leadership criterion in the model, as its leadership performance in 2006; 30.81 points out of 85 points assigned to strategic planning criterion in the model, as its strategic planning performance in 2006; 38 points out of 85 points assigned to focus on patients, health care customers and markets criterion in the model, as its focus on patients, health care customers and markets criterion performance in 2006; and 51.75 points out of 90 points assigned to information measurement, analysis and management criterion in the model, as its information measurement, analysis and management criterion performance in 2006; 37.23 points out of 85 points assigned to focus on personnel criterion in the model, as its focus on personnel performance in 2006; 24.81 points out of 85 points assigned to process management criterion in the model, as its process management performance in 2006. In sum, total point of process criteria performance in 2006 was 231.25.

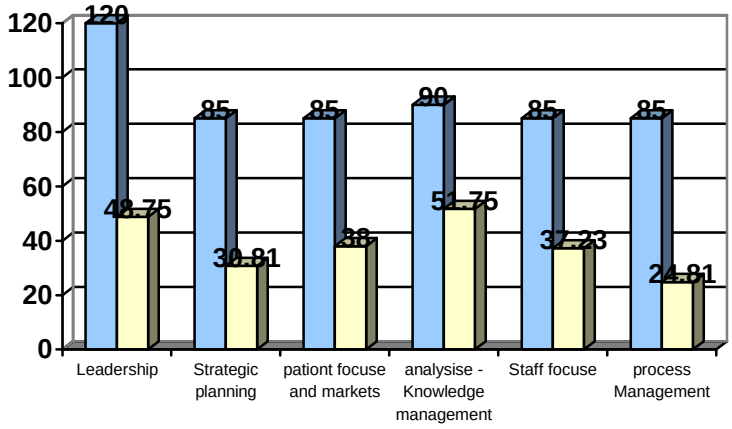

Diagram 1: Comparison of process criteria evaluation points of Ayatollah Kashani Hospital, 2006.

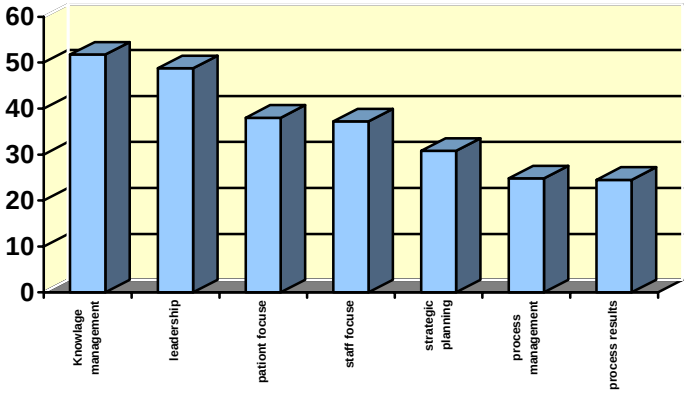

Diagram 2: Distribution of process and results evaluation points of Ayatollah Kashani Hospital based on main criteria, 2006.

For performance results, Ayatollah Kashani Hospital could achieve:
111 points out of 450 points assigned to organizational performance results criterion, as its organizational performance results evaluation in 2006.

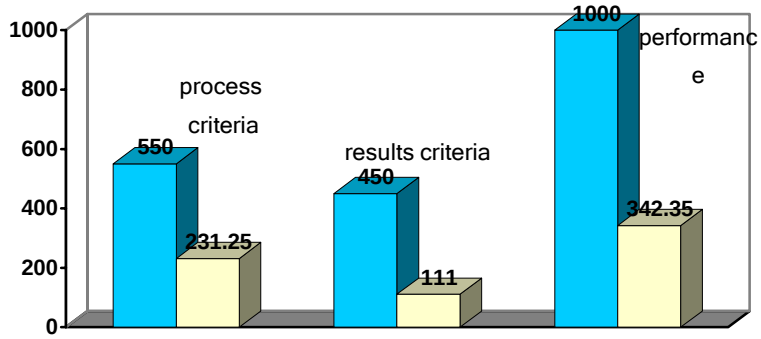

Diagram 3: Comparison of final evaluation point of Ayatollah Kashani Hospital based on process and results criteria, 2006.

In sum, point of organizational performance process criteria was 342.25 as performance of Ayatollah Kashani Hospital in 2006.

Discussion and Conclusion

According to data analysis and points obtained for 6 main organizational performance evaluation criteria, it was concluded that strategic planning criterion was in the stage of reaction to the problems. Leadership, focus on patients, health care customers and markets, focus on personnel and process management criteria were in the stage of onset of systematic procedure; and information measurement, analysis and management criterion was in the stage of onset of systematic procedure for measurement, analysis and revision of performance, and had integrated procedure for information management.
For leadership criterion, it was concluded that if leadership criterion is located in any stage of systematic, integrated or consistent procedure, other criteria will be influenced by it and will be located in the same stages with small differences. What observed in this study was indicated that of 6 process criteria for evaluation of organizational performance, 3 criteria together with leadership criterion was in onset of systematic procedure. In their study, Pribotak and Katshal (19) also obtained the same result for influence of leadership on each process criterion. In fact, direction of leadership will influence all process criteria and results criterion.
For strategic planning criterion, it was concluded that attitude of the hospital towards strategic planning was not as a systemic factor and place of strategic planning has not been defined for promotion of organizational objectives. In his study, Hamidi (20) suggested that strategic planning was necessary for success of quality models. Mira and Collier (14) also found that development and deployment of strategies are necessary for health care organizations.

For focus on patients, health care customers and markets, it was concluded that success was achieved in meeting early needs of the patients and health care customers and markets, but since priorities, needs, and expectations of the patients, health care customers and markets had not determined at different levels, no action was taken for meeting them and patients' satisfaction has been studied in some fields. Comprehensive study on quality had revealed importance of identification of customers' needs and satisfaction. Thus, Yusefi introduced focus on customers as a system for supporting marketing and Hosseini (21) believes that for achieving the best performance, managers are needed to focus on customers' needs and satisfaction.

For information measurement, analysis and management, it was concluded that measurement, analysis and revision of performance were applied in the form of scales and quantitative indices of performance and qualitative indices were ignored, while information management were provided in an integrated form and security and authenticity, accuracy and accessibility of information and data were met. Hamidi (20) found that lack of information is one of the main factors leading to failure of quality improvement plans, but in this study, there is a lack of application of existing information and their analysis and revision.

For focus on personnel criterion, it was concluded that organization and management of the work and performance of personnel and employment and promotion was provided in a concentrated and traditional manner. Training needs are predefined and influence of training on individual and organizational performance of the personnel and their job skills are not evaluated. Evaluation of personnel's satisfaction and welfare is another subject attracted a little attention and participation of the personnel in activities is limited. In his studies in health care sector, Hamidi (20) obtained the same results, with level of participation of the personnel being 50% low and 50% moderate and at no level, participation of the personnel was high.

For process management criterion, it was concluded that putting health care services and supporting activities into processes had been recently established and was in the stage of identification of care and support processes. In his study on making processes and improvement of processes, Nick Niaz (22) also pointed to ignorance of support processes and considered its contribution to be 29% in making processes and their improvement, while findings of this study indicated that performance of support processes were rather better than performance of care processes.

For organizational performance results criterion, it was concluded that a limited attention was paid to results criterion in specified fields in the form of quantitative results, and key indices and scales of the results had not been defined in different fields and current methods did not follow a special standard for determination of quantitative indices. On the other hand, provision of such quantitative results to fields and various units were very limited. Using comparative and benchmarking information needs an accurate results analysis

system, which is not applied for taking any action for continuous improvement of the results. The study conducted by Salarian (23) on relationship between quality management and executive performance in hospitals also confirms conclusion made by present study that the hospitals are evaluated merely based on structural and organizational facilities, equipment, and application of the same standards without considering that how and to what extent the resources and facilities are used, while it is inevitable to study performance indices of the hospitals.

By using Malcolm Baldrige Model for evaluation of performance of hospital, it can be concluded that all criteria are interconnected as components of a system and are influenced by each other, and its extent and severity of influence of the components are determined by their points. And due to systemic view, identification of inputs, outputs, system components and processes and feedbacks are obtained, paving the way for organizational learning and improvement. Finally, performance evaluation is not just examination of quantitative indices and such outputs as bed occupancy index, rate of reception per bed, mean patient stay, and etc. Of course, using any of these indices is necessary but not sufficient.

Using this model makes it possible to compare performance of various hospitals inside and outside of the country.

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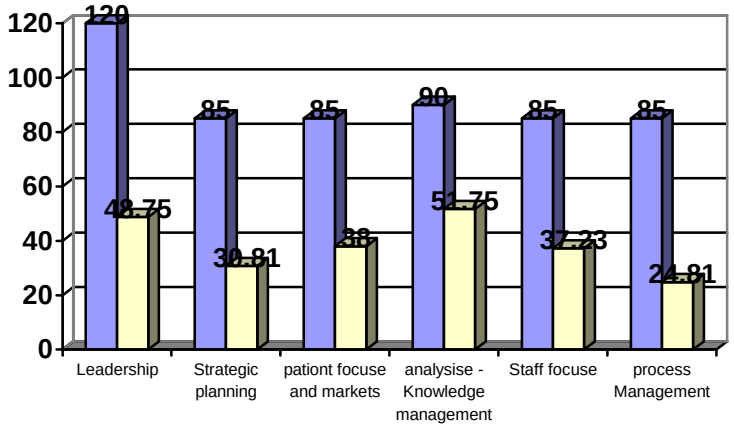

Diagram1:Comparison of process criteria evaluation points of Ayattollah Kashani hospital,2006

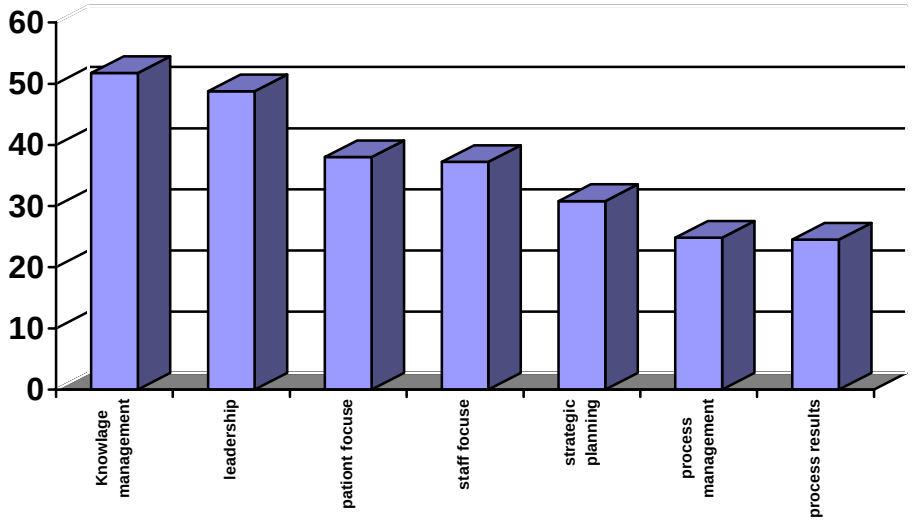

Diagram2:Distribution of process and result evaluation point of Ayatollah Kashani Hospital based on main criteria,2006.

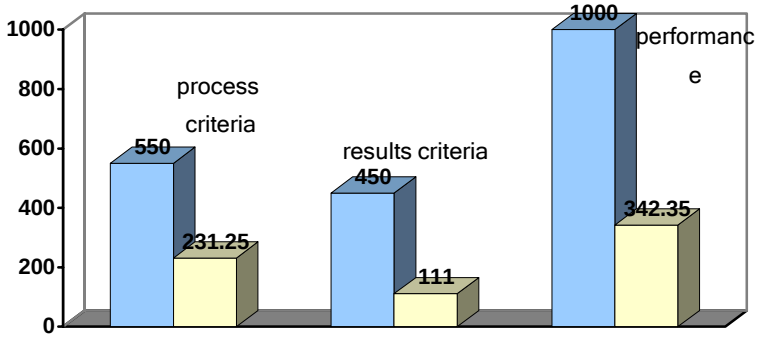

Diagram3.Comparison of final ofvaluation point ofAyatollah Kashani hHospital basedon on process and result ceritria,2006.