How do the Hospital Services in Katsina State Nigeria Use Performance Management in Order to Manage the Delivery of Emergency Services?

Mohammed I Abubakar*
University of Liverpool School of Management, Liverpool, United Kingdom and School of Business and Management, Texila American University, Guyana, South America

*Corresponding Author: Mohammed I Abubakar, University of Liverpool School of Management, Liverpool, United Kingdom and School of Business and Management, Texila American University, Guyana, South America.

Received: September 28, 2020; Published: October 15, 2020

DOI: 10.31080/ecec.2020.04.00378

Abstract

Introduction: High quality performance and timely intervention is of utmost priority in medical emergency management. Performance management in the healthcare settings ensures that highest level performance is achieved through active management that aligns organizational activities with its set objectives and policies.

Objective: To understand how and to what extent the Katsina state Hospital Services is using performance management to ensure efficiency and effectiveness in the delivery of emergency medical services to the population.

Study Design: A cross-sectional survey was done using quantitative methods. Paper-based questionnaire was used to obtain responses from different stakeholders in emergency services delivery in order to get variety of opinions about performance management of emergency services delivery.

Principal Findings: Analysis of the results have shown that the managers of Katsina state Hospital Services Management Board have knowledge about performance management however its processes are inadequately implemented in managing the delivery of emergency services which lead to moderate level performance indicators.

Conclusion: Performance management processes are relevant to the performance of emergency services delivery system. Adequate knowledge of these processes is needed by managers to implement effective emergency services delivery desired by the populace.

Keywords: Emergency Services Delivery; Performance Management; Effectiveness; Efficiency

Literature Review

Management is the application of efficient working methods and effective control over the activities of an organization or a group of people. Management provides a distinct focus and a purposeful action that ensures success of a goal (Atrill and McLaney, 2009). Through management people cooperate and work together to achieve what they could not as individuals and this is achieved by organizing people in a way that will ensure effectiveness in an efficient manner: Kyriazoglou [1] described management as a process that is made up of ‘planning’, ‘organizing’, ‘leading’ and ‘controlling’ which gives purpose and direction to the activities of an organization.

Performance management and its process

Performance management has been defined as a management tool used as an effective system of measurements and performance improvement in order to increase organization’s effectiveness [2]. In another definition performance management has been described as...
“interrelated strategies and activities to improve and unite performance of individuals, teams and organizations” by aligning their objectives towards success [2,3]. Performance management leads to growth of the organization because if properly implemented it improves the performance of employees through development of their skills and abilities as well as their capacity to contribute towards the achievement of organizational objectives [2].

The process of performance management is made up of the following steps: planning and setting of objectives; implementation or assigning of responsibilities to execute plan for performance; evaluation and performance measurement; and feedback of performance information in decision making [2,4,5]. In the initial stage planning is carried out (also known as strategy formulation) to define the path to be taken by employees and other resources to achieve the set organizational objectives. Expectations on employee performances will be specified and goals will be set for each stakeholder that will be aligned to organizational goals in an effort to achieve success [2,6]. The next step is the stage of implementation or execution and this involves activities such as carrying out specific responsibilities by both managers and employees which include guiding of employees by managers and being available always for employees to turn to whenever they face any challenges in the course of their work. It has been shown that the mere clarification of the career path for the employees lead to improved performance and productivity through implementation of the strategic plan [2,7]. Evaluation and performance measurement stage involves assessment of performance carried out by both employees and managers at the same time. Employees rate their own performance (through self-monitoring data) while managers are engaged in assessing the achievements of the employees [2,8]. The aim of the evaluation process is to measure the performance of employees in a careful and helpful attitude so that the cooperative atmosphere so created will lead to easy identification of any source of performance problems [2,6]. Finally, the performance information generated from the evaluation process is used as a way of feedback in making future plans for development of the organization. The performances and achievements of employees are analyzed then the results are discussed in a forum consisting of both managers and employees taking time to understand the strengths and the weaknesses of employees or processes then suggest ways to improve the situation such as training, changing of behaviors, procuring new equipments and developing structures [2,6].

**Performance and its key indicators in public organizations**

Hurst and Jee-Hughes [9] has described performance as the level by which a system or an organization achieves its set goals or objectives. Key indicators of performance are measures of the extent to which set objectives of an organization have been met or not [10]. Indicators of performance which have been used under different contexts include responsiveness to patients’ needs and treating them with courtesy; staff competence; and the outcomes of health services delivery [11]. Other performance indicators include availability of important resources (such as medical consultants (doctors), specialist nurses and diagnostic test kits); time it takes to access emergency services (time to triage, time to nursing assessment, time to access doctor’s evaluation, time to treatment of pain, length of time it takes for an emergency patient from admission in the ER to transfer to inpatient or discharge); client (patient) satisfaction with services received (pain management, quality of care, outcomes of care); and staff satisfaction [11]. These indicate effectiveness of medical services delivered as well as improved health outcomes. Performance management is highly needed in the public sector due to increased delegation of responsibilities and the need for accountability as well as evaluating the effectiveness of services delivered so as to encourage results-based management [12-14].

**Medical services delivery**

Delivery of medical services refers to the processes that lead to organization and provision of medical services. This involves activities by personnel and their interactions with patients [15]. The main goal of medical services delivery is to improve health of individuals and populations through efficient delivery of quality health care (emergency) to all those in need of it at the most appropriate time using cost effective means and resources [16,17]. Efficiency in medical services delivery ensures an improved outcome for patients because access to care is made universal and there is fairness in financial contribution [16]. The pressure of demand for improved quality, safe and efficient

---

How do the Hospital Services in Katsina State Nigeria Use Performance Management in Order to Manage the Delivery of Emergency Services?

services from consumers leads to efficiency in service delivery [18,19]. In an attempt to improve quality and effectiveness, the public health services are turning to performance management to manage delivery of services and ultimately improve performance [13,20,21].

Medical (hospital) services delivery and performance management are intricately related that is why performance management was described as a versatile tool of management in health care [4]. The importance of performance measurement in health services delivery has been widely recognized because performance measurement is an important aspect of quality improvement [11].

Performance of emergency services has been assessed using such factors as overcrowding of emergency room and access to appropriate care to give insights into the processes and activities associated with management of emergency services delivery [11]. Therefore performance management is used in the management of medical services delivery through strategic planning and setting up of clear and measurable goals for employees and motivating them in the form of providing adequate rewards financial and non-financial as this will encourage increased efforts that will lead to improved outcomes for patients [6].

In Nigeria health services provision is a responsibility shared by the 3 levels of government in the country; the Federal, States and Local government authorities (LGA) (Federal Ministry of Health, 2010). The medical services delivery system has been described as ‘weak’ because it is characterized by inequitable distribution of resources, declining quality of infrastructures, poor human resources management, unfriendly attitude of healthcare providers, weak referral system, low coverage of interventions, lack of essential drugs, weak integration and poor supportive supervision (Federal Ministry of Health, 2010). Scholars have confirmed the presence of many barriers to access to healthcare services as well as improper distribution of resources and lack of skilled personnel (healthcare professionals) [22,23]. Other challenges being faced by the Nigerian health system include policies with short life, lack of funding, infrastructural challenges, brain drain, lack of harmony between different groups of healthcare professionals and many more [24,25]. The capacity to provide emergency services effectively is limited especially in northern Nigeria where the health indices are worse. Nigeria’s government is however making efforts to improve the situation by introducing National Health Insurance Scheme (NHIS) and the national health act which are expected to reform health care management in Nigeria [26]. Reports have however indicated a lack of performance of the NHIS [26].

Summary of key processes of performance management

The critical assessment of the literature has revealed the key processes which made up performance management. These are summarized as follows:

- Planning and setting of objectives,
- Implementation or assigning of responsibilities to execute plan for performance,
- Evaluation and performance measurement,
- Feedback of performance information in decision making.

Currently information is sparse on the use of performance management as a tool of management by managers of Katsina state hospital services to manage the delivery of emergency services. The major question is in what ways and to what extent are the hospital services using performance management to manage emergency services delivery? This research is focused on the Katsina state Medical (hospital) Services’ managerial tools used to ensure that the emergency services delivery is efficient and effective over a specific period of time as well as the processes and activities as regards the management of emergency services delivery and if time frame is set for achieving set goals. However there is paucity of knowledge in this area of research because researchers have not investigated how the Katsina state medical services use performance management in order to manage the delivery of emergency services. This is a gap of knowledge that this research dissertation intends to fill.
Complete anonymity was ensured throughout the process of data collection as no personal details were recorded for any individual.

**Figure 1: Conceptual model.**

The conceptual research model

**Methodology**

**Research design**

A cross-sectional study is done with the emergency departments (EDs) of public hospitals in Katsina state as the units of analysis. The research population includes all the hospitals managed by the Katsina state Hospital Services that have an ED. The author carried-out cross-sectional survey with the aim of establishing relationships between variables and concepts [27]. The variables are categorized into dependent (Emergency services delivery - performance indicators: emergency room (ER) waiting times; availability of skilled personnel, availability of required equipments; availability of medication; rate of discharge; client and staff satisfaction) and predictor variables (performance management: strategic planning; implementation; performance measurement and feedback). The variables relate to each other in a positive or a negative way and the assumption is the predictor variables are causing the dependent variables [15,27].

**Preparation**

Paper-based survey questionnaire was used to collect data. The questionnaire with the same set of questions has been given directly to all the respondents. The questions have been categorized into groups based on the processes that made up performance management which have been described in scholarly articles. These questions explored the personal opinions of the respondents to answer the research question.

Medical and nursing professionals, administrative and managerial staff were invited to join the survey voluntarily without any sampling to ensure that an adequate size is recruited and that which is representative of the whole workforce that will include medical and nursing professionals, administration and management staff. Patients and patient-relatives were also invited tojoin the survey. A total of 150 participants joined the survey voluntarily. This sample that has the same characteristic as the population was used in data collection [27,28]. It also provided the author the opportunity to make a firm decision about the relationship of the sample and the population in terms of their attributes [27].

**Collection of data**

The author has discussed with all the respondents the issues of confidentiality and has assured everyone that anonymity will be maintained. The respondents were allowed a period of 2 weeks to complete their responses while the author followed up 1 week after the questionnaire was distributed to collect the responses and remind those who did not complete to do so. The author also directly administered the questionnaire to patients and their relations to get their responses to some of the questions.

How do the Hospital Services in Katsina State Nigeria Use Performance Management in Order to Manage the Delivery of Emergency Services?

Method of data analysis

Sampling technique

A sampling frame consisting of the list of all the hospitals with an emergency department in Katsina state was drawn. This sampling frame was stratified into 3 homogenous groups based on geographical location of the main regions in the state. Simple random sample of hospitals (EDs) was taken from the three (3) different strata to ensure that all locations are proportionally represented in the study.

Data analysis

A coding frame was developed at the beginning which contains a list of codes that was used to look for patterns in the data [27]. A code describes a variable in a short text. All the questionnaire responses were read through by the author to gain an insight into the opinions of the respondents. Using the list of codes pattern and similarities were looked for in the responses and codes were assign to each response on the questionnaire. The codes were noted down on the right hand column created for comments on the questionnaire responses by the author (Annex 1).

A table was then created with the variables that have been identified in the questionnaire responses which were later interpreted (Annexes 2 and 3).

The author ensured that no individual or facility was given undue advantage during sampling process. Adequate sample size in proportion to the population size will ensure precision in research results [27]. Pilot study was carried out to assess the reactions of participants on the format of the questionnaire and the questions it contains. The author wanted to understand the length of time it took a respondent to answer the questionnaire and if there are questions that need more explanation, rephrasing or better expressed differently.

Results and Discussion

A wide range of participants who were mainly professionals working in the ED were involved however the questionnaire was also administered to patients to get their perspectives on the topic. Out of the 131 respondents twenty four were doctors, fifty nine nurses, ten administrative staff and eighteen patients the remaining twenty consists of other medical staffs.

<table>
<thead>
<tr>
<th>Issue code</th>
<th>PM process</th>
<th>Emergency Department (ED)</th>
<th>Results</th>
<th>Implications</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>Total (%)</td>
</tr>
<tr>
<td>A1</td>
<td>Setting of goals and objectives</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>98.5</td>
</tr>
<tr>
<td>A2</td>
<td>Optimize resources</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>100</td>
</tr>
<tr>
<td>A3</td>
<td>Identify requirement for performance</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>B1</td>
<td>Guiding of employees to understand what is expected of them</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>94.7</td>
</tr>
<tr>
<td>B2</td>
<td>Easy access to guidance in case of any challenges while on the job</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>77.1</td>
</tr>
</tbody>
</table>

How do the Hospital Services in Katsina State Nigeria Use Performance Management in Order to Manage the Delivery of Emergency Services?

Planning and setting of objectives

Respondents have confirmed that the process of setting up goals and objectives is actively used by the hospital services through definition of path to be followed by employees to achieve the set organizational objectives. Other aspects of this process described by respondents include training of employees as well as structural adjustments in the ED to facilitate performance. Some respondents stated that the training of paramedic cadre of health workers represent a plan which the Hospital Services management of Katsina state has made that is aimed at improving the performance of the emergency services delivery because paramedics are the first contact of emergency patients especially before arrival to the ED. However, some gave example of training and workshops organized for ED employees where the managers of Hospital Services Management communicate the organizational plan and objectives.

Responses have also confirmed that the hospital services ensure availability of needed resources for the performance of emergency services. This was described as annual budgetary provisions that made it possible to procure diagnostic equipments, staff recruitment and training of available staffs on specific skills. These are based on a plan to optimize resources needed for performance of the ED. Respondents however described this aspect as deficient in the emergency departments of Katsina state hospital services. Some respondents maintained that this is the reason for a lack of particular life saving items in the emergency departments.

To this end many respondents have suggested that managers of Hospital Services of Katsina state do their job of guiding to ensure that employees are placed on the right path towards organizational success. Some respondents stressed that on- the- job training is carried out from time to time to increase employee understanding of their work. In addition, many respondents confirmed that employees are given written job description as well as guidance, monitoring and supervision so that they will understand what is expected of them in emergency services delivery.

The results have also confirmed that employees have easy access to guidance through continuous supervision by managers. Responses analyzed showed that managers in Katsina State Hospital Services willingly support their employees on their jobs because as a respondent puts it they provide constant supervision and monitoring.

Respondents suggest that activities in the emergency departments were less effective probably due to lack of adequate skilled personnel or lack of other required resources like medical and surgical equipments.

Respondents confirmed that performance of employees is measured by heads of emergency department of Katsina state Hospital Services. It is done in the form of staff appraisal done at regular intervals and through supervision and monitoring of employees at work.

Table 1: Overview of the research results.

Key: PM: Performance Management Process; ED: Emergency Department; x: Means the questionnaire response supports use of the process; (-): Means the questionnaire response does not support the use of the process or was not written as a response.

<table>
<thead>
<tr>
<th></th>
<th>Activity Description</th>
<th>x</th>
<th>31.3</th>
<th>Often used</th>
<th>Not aware</th>
<th>Action required</th>
</tr>
</thead>
<tbody>
<tr>
<td>B3</td>
<td>Optimise activities in the ER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>Performance measure-ment done by managers</td>
<td>x</td>
<td>100</td>
<td>Most widely used</td>
<td>Aware</td>
<td>No action required</td>
</tr>
<tr>
<td>C2</td>
<td>Employee measures own performance</td>
<td>-</td>
<td>0</td>
<td>Not used</td>
<td>Not aware</td>
<td>Action required</td>
</tr>
<tr>
<td>C3</td>
<td>Evaluation done regularly</td>
<td>x</td>
<td>94.7</td>
<td>Frequently used</td>
<td>Aware</td>
<td>No action required</td>
</tr>
<tr>
<td>D1</td>
<td>Use of performance information to understand strength and weaknesses of employees and processes</td>
<td>x</td>
<td>91.6</td>
<td>Frequently used</td>
<td>Aware</td>
<td>No action required</td>
</tr>
<tr>
<td>D2</td>
<td>Feedback of performance information in future planning</td>
<td>-</td>
<td>0</td>
<td>Not used</td>
<td>Not aware</td>
<td>Action required</td>
</tr>
<tr>
<td>D3</td>
<td>Use of performance information to improve ER services</td>
<td>-</td>
<td>71</td>
<td>Used</td>
<td>Aware</td>
<td>No action required</td>
</tr>
</tbody>
</table>

Respondents have however shown that employees do not measure their own performance in Katsina state thereby making the evaluation process incomplete based on the standards described in the literature. Respondents were either silent on this issue or in some cases reported that staff appraisal is only done by managers.

The results have confirmed regular performance evaluation by the Hospital Services Management of Katsina state. This regularity is achieved through continuous supervision and monitoring of employees by managers and senior colleagues however respondents maintained that evaluation is not carried out on a daily basis.

Some respondents described that timely reporting of challenges faced by employees is a form of performance assessment because it will give managers the opportunity to find solutions and pave the way to achieving success.

Respondents have confirmed active use of feedback process by the Hospital Services Management through meetings with employees to discuss their performances and the areas of their work that they need to improve. Some of the respondents reported that staffs go through an interview process done by their managers to discuss their performances while some respondents also suggest that feedback is given to employees while carrying out their routine.

Respondents have generally suggested that there is inadequate use of performance information in future planning for emergency services delivery by the Hospital Services management of Katsina state.

The results have confirmed the use of performance information to improve emergency services by the Hospital Services management of Katsina state. This as suggested by respondents is done through distribution of appraisal reports to different stakeholders so that efforts are made to manage challenges identified in the performance information.

**Key performance indicators**

Respondents almost unanimously confirmed that the performance of emergency services managed by the Hospital Services of Katsina state is of moderate level. The results showed that skilled personnel, their competency in providing emergency services and availability of equipments are all inadequate. Responses have also given the impression that patients face moderate delay in accessing services in the emergency department. This same level of delay has also been reported by respondents in the process of transfer of patients to other units. Clients are moderately satisfied with the services received as well as the overall outcome of emergency services delivery. Staff satisfaction was also shown to be moderate just like other indicators were in the intermediate range.

<table>
<thead>
<tr>
<th>Issue Code</th>
<th>Key Performance Indicator (PI)</th>
<th>EDs Results</th>
<th>Interpretation</th>
<th>Implication</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>Availability of skilled personnel</td>
<td>x (-) X</td>
<td>67.9 32.1 Moderate</td>
<td>Inefficient/ineffective ER services</td>
<td>Action required</td>
</tr>
<tr>
<td>E2</td>
<td>Staff competence</td>
<td>x x X</td>
<td>100 0 Moderate</td>
<td>Inefficient/ineffective ER services</td>
<td>Action required</td>
</tr>
<tr>
<td>E3</td>
<td>Availability of equipments</td>
<td>(-) x X</td>
<td>61.8 30.5 Moderate</td>
<td>Inefficient/ineffective ER services</td>
<td>Action required</td>
</tr>
<tr>
<td>E4</td>
<td>Time to access emergency services</td>
<td>x (-) X</td>
<td>63.4 25.2 Intermediate</td>
<td>Inefficient/ineffective ER services</td>
<td>Action required</td>
</tr>
<tr>
<td>E5</td>
<td>Time to discharge or transfer to other units</td>
<td>x x X</td>
<td>91.6 0 Intermediate</td>
<td>Inefficient/ineffective ER services</td>
<td>Action required</td>
</tr>
<tr>
<td>E6</td>
<td>Client satisfaction with services</td>
<td>x x X</td>
<td>94.7 0 Moderate</td>
<td>Inefficient/ineffective ER services</td>
<td>Action required</td>
</tr>
<tr>
<td>E7</td>
<td>Staff satisfaction</td>
<td>x x X</td>
<td>74.8 0 Moderate</td>
<td>Inefficient/ineffective ER services</td>
<td>Action required</td>
</tr>
<tr>
<td>E8</td>
<td>Outcomes of emergency services delivered</td>
<td>x x X</td>
<td>100 0 Moderate</td>
<td>Inefficient/ineffective ER services</td>
<td>Action required</td>
</tr>
</tbody>
</table>

Table 2: Overview of results showing performance indicators.

Key: PI: Key Performance Indicators; ED: Emergency Departments; a: Short Time or Adequate; x: Moderate or Intermediate; (-): Long Time or Inadequate.
How do the Hospital Services in Katsina State Nigeria Use Performance Management in Order to Manage the Delivery of Emergency Services?

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Learning Points Summary</th>
</tr>
</thead>
</table>
| A. Planning and Setting Up Objectives | • Hospital Services of Katsina state use planning and setting up of objectives as a step in the process of performance management.  
• The process is not used optimally by the Hospital Services in the management of emergency services delivery.  
• Proper use of this process positively influences the performance of organizations |
| B. Implementation of Plan for Performance | • This process is also partially used by the Hospital Services management to manage emergency services delivery.  
• This process help to improve performance and productivity by clarifying for employees what is expected from them. |
| C. Evaluation and Performance Measurement | • Performance measurement as a process of performance management is also partially used by the Hospital Services of Katsina state.  
• Evaluation of performance carried out by both employees and managers has been shown to positively influence effectiveness as well as improves relationships between management and employees. |
| D. Feedback of Performance Information in Decision Making | • The process of using performance information in planning for the future of emergency services in Katsina state has been found to be incomplete.  
• This process creates a means by which the strengths and weaknesses of employees will be understood while at the same time suggest ways to improve future performance. |
| E. Key Performance Indicators | • The effectiveness and efficiency of emergency services delivery by the Hospital Services management of Katsina state has been found to be deficient.  
• Performance of emergency services delivery system is moderate. |

Table 3: Learning points summary.

Development of validated research model

The validated research model is summarized in figure 2 below. It describes the relationships between the predictor and the dependent variables. It shows that adequate use of performance management in emergency services delivery positively influence the outcome for patients. This has thus proven the theoretical model [29,30].

![Figure 2: Validated model.](image-url)
Conclusion and Recommendations

Summary of the findings

The study has sought understanding on the extent to which the Hospital Services of Katsina state uses planning and setting up objectives, implementation of plan for performance, evaluation and performance measurement and feedback of performance information in decision making as the processes of performance management. Answers have been provided completely to the questions in the previous chapters.

Implications for management

Need for improved planning and setting of goals

Based on the results adequate planning is needed in order to set measurable and achievable goals and specify performance expectations for each stakeholder in - line with the organizational objectives. This will ensure success through improvement of the standards of the emergency services delivery system.

Optimize activities

The results have shown that activities in the ER are not going- on at the best level. The managers need to train, guide, monitor and offer clarifications about challenges to employees this will lead to improved efficiency and effectiveness in carrying out activities in the ER.

Performance measurement

The study has also shown that there is need for proper performance measurement which should be carried out regularly by both managers and employees.

Feedback

The role of feedback of performance information in decision making is very important for the future of the organization. Feedback provides support for improvement of processes and strengthens employee performance and motivation.

Weaknesses of the research

The sample size of 150 people is limited and may affect generalizing the results to the population. Also most of the respondents are employees of the same institution being studied and this may lead to some not providing honest responses even though anonymity and confidentiality was ensured in all the questionnaires.

However, the results of the research are considered valid and reliable because validity and reliability has been ensured.

Authors’ Contributions

MIA conceived the study; MIA designed the study protocol; MIA carried out the Field work; MIA carried out the analysis and interpretation of these data. MIA drafted the manuscript; MIA critically revised the manuscript for intellectual content. The author read and approved the final manuscript. MIA is guarantor of the paper.

Funding

None.

How do the Hospital Services in Katsina State Nigeria Use Performance Management in Order to Manage the Delivery of Emergency Services?

Conflicts of Interest

None declared.

Ethical Approval

Full ethical clearance was given by the Katsina state government, Nigeria.

Bibliography


