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Healthcare

A STUDY OF PHYSICIANS' ASSESSMENT OF PERFORMANCE INDICATORS IN PUBLIC HOSPITALS

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ABSTRACT This paper evaluates the perception of some of the performance indicators in terms of their importance and its actual performance in the district and general hospitals of Kerala. A set of fifteen performance indicators were selected based on the literature review and discussions with the experts. A five-point Likert's scale was used to elicit the perception on importance and performance. Physicians serving in the district hospitals with a minimum of two years' experience were chosen for the study. The survey was administered in twenty-three hospitals across eight districts. All the 184 responses were taken up for analysis. An Importance – Performance analysis was done using the IPA quadrant method. The study has brought into focus the functioning of the Intensive Care Unit (ICU), emergency care services, assessment of training needs for physicians, the need to conduct periodic satisfaction survey of the patients, importance to allocate adequate funds were some of the issues that needed urgent remedial action. Though this is one of the pioneering study on the physicians' perspectives on the identified dimensions of performance, further detailed studies are essential to draw up any policy prescriptions. A comprehensive study including other health workers like the nurses, support staff could bring deeper insights into the functioning of public hospitals. Nevertheless, the findings of the study argue well for major administrative interventions for streamlining the functioning of the public hospitals and will argue well for higher allocation of resources from the government.

KEYWORDS : Performance indicators, Importance – Performance Analysis, Public hospitals, Physicians' perception.

Introduction

In the Indian context, publicly funded secondary care hospitals play a vital role for proving curative services in the rural areas and for the urban poor (Mission statement, 2007). These hospitals are sometimes the centre of first call, given the fact that, primary centres are mostly closed in the night and holidays. The scarcity of beds in the tertiary care hospitals and the lack of comprehensive diagnostic services and 24 X 7 service in the peripheral areas, make the secondary care hospitals carry the maximum patient load, almost and always, rendering the quality of services poor. However, these hospitals are affected by host of managerial as well as operational issues, making them under perform leading to massive wastage of scare government resources (Manjunath et al, 2007). Physicians are the crucial decision makers in any hospitals (Institute of Medicine, 2006). Seldom their views are elicited, analysed and factored into the decision making. Therefore, this study aims to elicit the views of practicing physicians on certain identified performance dimensions and to analyse them and draw conclusions. The popular tool – Importance Performance Analysis – was used to measure the performance score as well as the importance score on the identified performance dimensions to draw conclusions. Lack of adequate literature on performance of Indian hospitals made the identification of the performance dimensions rather difficult. Therefore, as systemic was of perusing the available literature was resorted to identify crucial performance dimensions in Indian hospitals.

Literature Review

According to (Balarajan et al 2011), health care costs is one of the major reasons for impoverishment of rural poor in India. While, the entire cost of treatment including the physician charges have to paid in private healthcare organisations, the cost of drugs, diagnostic tests and medical appliances account for more than half of the OOP in the Public hospitals. Some of principal reasons for this are, that publicly funded SCHs suffer from serious inadequacies ranging from infrastructure, human resources and technology (Ramani and Mavalankar, 2006). The physical infrastructure is often old and dilapidated as public investments are low. The diagnostic equipments does not reflect the advances made in the industry and doctors are left with these out dated equipments to handle scores of patients on a day to day basis, rendering the quality poor (Hammer et al, 2007). Besides, wide variations in the quality of services from physician to physician and hospital to hospital makes it vulnerable for varied opinions. According to Mallya, 2012, poverty, illiteracy, gender bias, urban bias, poor quality of health services and lack of adequate access to healthcare centres are factors primarily responsible for this dismal performance of the publicly funded secondary care hospitals. At a macro level, absence of a comprehensive health policy, loose regulatory mechanisms,

inadequate budgetary allocation, improper man power planning, infrastructure inadequacies, low-accountability and poor management have all affected the functioning of Public hospitals (Ramani and Mavalankar, 2006). Management of public hospitals is severely and adversely affected due to: low budgets, untimely and irregular supplies and corrupt practices. This pattern of financing system in itself contributes to challenges the sector is facing: health inequity, inadequate availability, unequal access, and poor quality and high cost services (Kumar, et al 2011). Citing reasons for the ineffective public-sector healthcare organisations, Reddy et al (2011) commented that lack of political commitment to recognise health as an essential component of human development was shown in continuous low investments, badly formulated policies, and ineffective implementation of the schemes. Often, surgeons are posted where there is no anaesthetist and operation theatre are, therefore of no use (Rao, S. 2009). Durand (2010) studied the functioning of district hospitals in the Pacific Islands and developed a 'hierarchy of needs' for these hospitals using the Maslow's model. He concluded that, district hospitals in the developing countries have more fundamental problems. These findings are also true in the Indian context.

Performance Indicators

Based on the findings of the literature survey and discussions with experts in the group, we identified fifteen performance indicators that are easily understood by the physicians and are verifiable on the ground. Moreover, these indicators were finalised taking into consideration the limitations experienced by government institutions. The list of identified indicators is shown in Table -1 below.
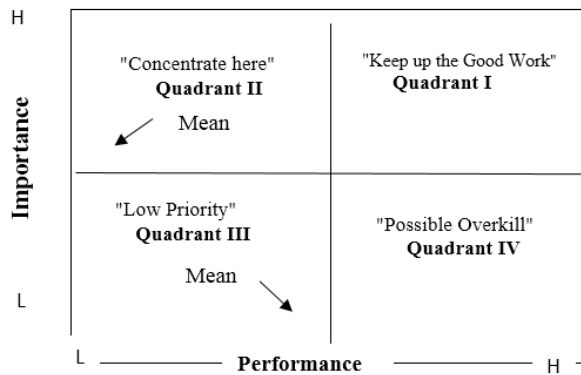
Table -1. Performance indicators identified for the study

1	Functioning of hospital library
2	Functioning of Intensive Care Unit (ICU)
3	Functioning of Casualty unit
4	Adequate waiting rooms for the patients & attendees
5	Need for multi-speciality departments
6	Capability to tackle epidemic diseases
7	Periodic satisfaction surveys among workforce
8	Adequacy of allotted funds
9	Adequate & regular supply of consumables
10	Periodic assessment of training needs of workforce
11	Adequate training opportunities to workforce
12	Due recognition for performing beyond the call of duty
13	Timely receipt of funds
14	Autonomy vested with the top management
15	Periodic patient satisfaction survey conducted

These indicators represent different areas of hospital management such as infrastructure, physicians focus, patient focus and governance issues in these hospitals.

Importance Performance Analysis

Martilla and James (1977) were the first ones to use Importance Performance Analysis (IPA) to ascertain the employee satisfaction. This tool analyses a value proposition by classifying its most important attributes in two dimensions: the importance of each attribute and judgements of its performance. It identifies which area or dimension a firm should focus on, to enhance customer satisfaction. Using this information from a sample of customers, the analysis plots each attribute on a grid (Mahal et al, 2010). The respondents are asked to score on a particular attribute from its importance and performance angle. Normally the performance scoring is plotted on the X-axis and the importance on the Y-axis. The intersection point is the grand mean of performance and importance scoring. In the traditional method, the four quadrants that emerge as a result of the plotting are discussed. The four quadrants are; high importance - low performance (concentrate here): high importance - high performance (keep up the good work): Low importance - high performance (possible overkill) and finally low importance - low priority (Low priority). Depending upon the cell location of the dimensions/ items, it will be possible to find out the areas for intervention. Fig 1 depicts the IPA grid.

Fig 1. Importance-performance grid.

Methodology: Questionnaire Design, Sample and Data Collection

The first step towards IPA is to form a suitable questionnaire based on the identified performance indicators. The indicators were examined by a group of experts to find out the face and content validity. The final questionnaire was administered to a group of 184 physicians and the responses were analysed. Respondents were asked first, to indicate the level of level of importance they attached to the attribute and then they were asked to evaluate the performance of that attribute in their hospital. On importance, participants were asked to answer the question, 'How important is this statement in your own view?' on a five-point Likert's scale wherein, least important was 1 and most important was 5 on the performance scoring, 'To what extent you agree with the statement with respect of its implementation in your hospital?' wherein strongly disagree was 1 and strongly agree was 5. Likert's scale was used for both the importance and performance rating. The sampling frame consisted of doctors working in the District hospitals in Kerala. Purposive sampling was used to physicians with a minimum of two years-experience. The questionnaire was administered through trained volunteers during the period between October – November 2017. Important sample details are indicated in Table 2.

Table 2. The sample details

Target Population	Doctors on pay roll of Directorate of Health Services		
Sample Dimension	184		
Sample Design	Convenient sampling, Doctors with minimum of 2 years' experience.		
Period of Survey	August 2017 – October 2017		
Sex	Males	90	48.9%
	Females	94	51.1%

Age		Mean	Std. deviation
		40.59	8.897
Qualifications	Graduate	29.3	
	post graduate	70.7	
Minimum experience	Maximum experience	Mean	Std. Deviation
2 years	31	10.61	7.35

As is seen from the table-2, the data is collected from 184 respondents of which, 51% are females and the rest 49% are males. The survey is conducted in eight out of 14 districts, indicating a good coverage of the respondents across the state.

Data Analysis

All the 184 responses were taken for the analysis. The mean score on importance and performance of each of the indicators is shown in Table -3 below. The point of intersection of these two axes represent the gran mean.

Table -3. Mean scoring of the performance indicators on Likert's scale

Performance indicator	Performance	Importance
Functioning of hospital library	1.85	3
Functioning of Intensive Care Unit (ICU)	2.35	4.55
Functioning of Casualty unit	2.37	4.55
Adequate waiting rooms for the patients & attendees	2.48	3.3
Need for multi-speciality departments	2.63	4.1
Capability to tackle epidemic diseases	2.95	4.22
Periodic satisfaction surveys among workforce	1.5	4.01
Adequacy of allotted funds	2.4	4.32
Adequate & regular supply of consumables	1.8	4.2
Periodic assessment of training needs of workforce	1.6	3.9
Adequate training opportunities to workforce	2.3	4.22
Due recognition for performing beyond the call of duty	3.1	4.13
Timely receipt of funds	1.9	3.23
Autonomy vested with the top management	1.8	3.3
Periodic patient satisfaction survey conducted	1.5	4.15

When these scores were plotted on the IPA quadrants, the distribution of indicators in various quadrants are shown in Figure -2 below.
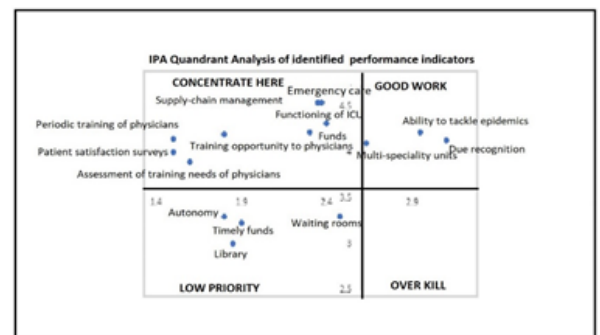
Fig -2. IPA Quadrant Analysis

As can be seen from the quadrant analysis, eight out of the fifteen indicators are found in the concentrate here' quadrant, highlighting the poor status of implementation of performance indicators in these hospitals. Functioning of Intensive Care Unit (ICU), emergency care unit, supply chain management, assessment of training needs of physicians, periodic satisfaction of patient satisfaction and physician satisfaction, are the areas that need immediate attention, according to this study. Similarly, the study has shown four indicators in the low priority areas. Hospital library, waiting rooms for the patients and attendants, autonomy in decision making and timely allocation of

funds are the low priority items as of now, and if these are not attended could migrate to 'concentrate here' quadrant soon. However, in the perception of the physicians, these institutions are doing well in their ability to tackle epidemic diseases, in having range of multi-speciality units and in according 'due recognition' to physicians for work rendered beyond the call of the duty.

Concentrate here

All the items in this sector are very crucial for the smooth functioning of the hospital. In fact, the intensive care unit and the casualty are the places where acutely the sick and seriously ill patients are managed. The intensive care unit and the casualty have to have good physical infrastructure and human resources to prevent mortality. Periodic satisfaction surveys, timely supply of consumables, allotment of adequate funds, periodic training assessment and opportunities for training, autonomy with the management of the hospital and periodic patient satisfaction surveys are other items which needs immediate attention. These issues clearly indicate that, hospitals under study have very poor focus on the physicians' training, career advancement and their satisfaction. Being crucial decision makers, their wellbeing and motivation are important for them to contribute well.

Low Priority

The study has clearly brought out poor status of the hospital library. Generally, the research journals and periodicals prove to be expensive when they are subscribed individually. The rapid changes in the medical technology makes it important for the doctors to keep up with latest information. Therefore, a library with wide variety of journals and books is a necessity, if doctors have to update their knowledge. The other important missing aspect in the infrastructure is the waiting rooms for the patients and their attendees. Often, lack of waiting rooms for the attendees makes it necessary for them to hire rooms in the vicinity of the hospital adding up to the cost of treatment. Often, funds are released in the last quarter of the financial year making it difficult for the management to utilise it effectively.

Areas of good work

The presence of multi-specialty units in the secondary care hospitals are highlighted by the survey. Most of these hospitals have good capabilities to tackle epidemic diseases, due to the mix of physicians drawn from primary care and tertiary care institutions, on rotational postings.

Conclusions

The performance of the secondary care hospitals, funded through public finance needs to be assessed and remedial actions to be instituted periodically for the funds consumed translates into effective healthcare services to the public. The role played by the practicing physicians are vital to understand the critical gap in the administration of such hospitals. Importance Performance Analysis (IPA) is one such simple yet very effective way of studying public hospitals. This study has brought out several key areas for instituting remedial actions. These findings have provided a set of action points for the hospital administrators for them to set the course of action, to improve the performance of the institutions. Nevertheless, this study being a pioneer study in the Indian context, further detailed and extensive data collection covering other healthcare workers could be of immense help.

Acknowledgements

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