International Journal of Economics, Commerce and Management
United Kingdom Vol. III, Issue 4, April 2015
http://ijecm.co.uk/ ISSN 2348 0386

INTERNAL SUPPLY CHAIN AND OPERATIONAL FAILURE A CASE OF HOSPITAL SERVICE IN ELBASAN CITY, ALBANIA

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Abstract

Low levels of performance service towards hospital patients cannot be justified with the obtained bonuses in the form of work income even when they are considered low. It, in this case represents the non-efficient hospital service. Failures in the operations performed, or in the service offered to the patients are mostly understood by the malfunctioning of the internal supply chain. This paper aims to identify the organizational factors which bring the failure of operations and therefore not a good experience for the patients. We will aim to shed light on the effective strategies for improving operations and through them the entire service. In order to realize this paper we have observed the nursing service of the surgical hospital of Elbasan city, Albania. In total we identified 28 factors which were responsible for the failure of the routine operations during a working day there. The failures were caused from a wide range of factors. With this we understand that avoiding operational failures requires cross functional efforts in order to rethink about the processes and work spaces so all of them can be oriented and integrated with the needs and the demands of the patients.

Keywords: Operation failure, internal supply chain, hospital service, strategy

INTRODUCTION

We are all witnessing the fact that public hospital leaves much to be desired. Despite the need to improve productivity, efficiency, service quality or patient experience, the actual situation shows that we are not heading in the right direction. Operation failure, is a concept which is used in cases when an operator does not have the tools, equipments, information or people to achieve a task and it leads to low performance in the service provided. Identifying and highlighting the reasons which bring the failure of the operations is considered an important step

in order to improve products and services performance in general and hospital care in particular. The most important dimensions of service quality are related to customer's waiting time, reliability, fulfilling their inquires, decency, consequence, convenience, accuracy and responsibility (Venetike Nakuci; Ali Turhani, 2009, p. 667). Operational failures can occur during each working day, especially when operations or services are complex and require the movement of vehicles, people, processes and information among departments and different sectors of the same organization. Based on what we just said operation failures are divided into operational failures due to information, tools and equipment, raw and other materials, financial support, assistance from others and work environment. The best way to remedy and avoid these failures in the future is to study and give them the proper attention. An employee loses on average three minutes of work because of a failure in the operation that he/she must do (Halbesleben, 2010).Given the many reasons which can bring operation failures we can say that even study opportunities in this part of operational management are equally numerous. Operation failures in hospital service are mostly due to lack of medicines and beds, delays in medical treatments, inaccurate diagnostics etc. In this paper we will be based on operation failures which result from physical movements of materials, staff and medicines within the space of a service center, such as for example the case of surgical hospital center of Elbasan, Albania. So through this paper we will study the internal supply chain of the chosen hospital center and try to recommend strategies which in the future would prevent the failure of operations enabling in this way the improvement of this service.

Operation failures and strategies in such cases

Despite the well-defined planes, failures in a service organization are a reality in their daily activities. Service organizations are generally considered as complex and dynamic and as such they function as a system of interdependent and tightly interconnected parts. This means that an error in one part will affect the rest of the system. The more tightly intertwined and connected these parts are, the more sensitive is the whole system in case of an error or failure. The difference between an excellently-organized service and a poorly organized one is that the excellently-organized one works hard not only to correct the failures but also to prevent their occurrence (Boaz Ronen, Joseph S. Pliskin, Shimeon Pass, 2006). Which are the sources of operation failures? Service failures generally occur for two main reasons; human errors and system errors.

At any moment the service received by the staff of the institution of the health service may be far from the patient's expectations. The reason for this may be the way how the service is designed. The system can be poorly built, it can be inappropriate for this type of service, or

the staff may behave or does its job badly. If a patient for example is promised to receive the answers of the analysis for an hour while he in fact receives them after several hours makes him think of this experience as a failure (Wright, 1999). Service failures can also be caused by the environment or its construction. If the patient feels that the temperature there is very low, the smell of the medicines is very strong, the waiting room is very dirty and the parking is to far, he or she will feel unsatisfied by these failures. It is sure that the staff can bring service failures if it is unfriendly, rude, untrained, inexperienced, missing recent information, misinformed and worst being corrupted. In order to minimize the possibility of operation failures, the service, its design, the distribution system and the staff must be carefully managed.

Once a service fails, the attempts to resolve the created impasse may cause the patient to have positive or negative feelings. A small problem can turn into a big one if the patient feels that the efforts are worthless, they were made too late or just to say. On the other hand serious efforts and the commitment to minimize or completely eliminate a major problem become a good example that should be followed by the rest of the organization. Besides this, the way how an organization responds to complaints and service failures shows how committed it is to provide the patient not only the required service but also fun (Lowson, 2002). Through the shown dedication and commitment these service institutions and not only them, convey clear messages about what they represent, work, believe and intend to reach. In this case it is natural to arise questions such as; Can errors and operation failures be recovered? What are the proposed strategies for these cases? Several researchers often argue that organizations should always apologize for their failures, but anyway only that is not sufficient. The treatment of operation failures can be accomplished according to the following three strategies:

- *Proactive and preventive strategies.* These strategies are part of the service design process, employee's training as well as distribution system or the supply chain. Preventing problems is not only easier but also less costly compared to their recovery. Proactive strategies are designed in such a way to identify and arrange every concern before they become an operation failure. So for example, according to proactive strategies making service requests predictions using statistical methods, makes work more carefully scheduled, gives the necessary number of staff, shifts, working hours, the right demand for medicines etc. When it is possible to predicted demands for a long time these strategies may result even more effective. Another preventive strategy is working groups, which consist of experienced staff. Staff training and its motivation are other examples. Regarding working group strategies we can say that in this case the goal is to form a group whose members are staff that have been in contact with patients for a long time. Then this group is required to

identify common problems and propose solutions or strategies to prevent their occurrence in the future.

- *Strategies during the process* are those strategies which monitor critical moments while offering or delivering service. The goal of these strategies is the establishment of mechanisms within the distribution system or internal supply chain and this in order to understand and fix problems before they affect the quality of the provided service. Some examples of these mechanisms are heart and tension control equipment. The advantage of these controls is to catch the problems in time, in order to enable the appropriate interventions and operations at the right time. Performance standards of operations and processes provide employees with gauges or standards which they use to compare and monitor their own performance while working. Specifying the waiting time of a patient in the emergency room before receiving the necessary service can be considered as a standard. Other examples are the number of controls that a nurse makes to a patient within an hour in a particular pavilion or the number of patients waiting to get service from the trained personnel. These strategies and standards make it possible for the personnel to minimize errors while performing their job. Another important role of the strategies during the process is that of taking patients' complaints while they are receiving the necessary service. This is also considered as one of the most difficult challenges given the fact that not all the patients prefer to complain. It is usually easier for patients to remain silent than to talk about their dissatisfactions. This is because they think no one is interested in their complaints or they are too upset or disappointed to deal with complaints. Loss of confidence and the fear of not receiving any service are two essential elements upon which the supervisors, the managers and the drafters of rules and policies, must focus and constantly work on.
- *Result strategies.* These kind of strategies aim to identify the problems after the patient has had his experience with the requested service, with other words after the service is provided. Result strategies enable the identification of failures after they have occurred so it becomes possible to recover the occurred failures and to prevent their repetition in the future. Typical examples of the construction and functioning of these strategies is the possibility that patients have to complain by calling the free green numbers which start with 0800 or even by filling the forms or questionnaires about their experience while receiving the required hospital care.

The supply chain and the rules upon which the functions and the duties of the employees are based

The internal supply chain is a collection of processes which enable customer service. It includes all materials, information, equipment and other human resources needed to offer clients or in our case patients the required service. Performing the proper service to patients in medical centers despite the above mentioned inputs, requires also medicines, good professional knowledge, and continuous studies for innovations and the latest discoveries in the field of medicine. Operation failures can occur at any stage of the internal supply chain and it can be caused by many factors such as human errors, delays, malfunction of equipment and vehicles and lack of communication (Steve Brown, Kate Blackmon, Paul Cousins and Harvey Maylor, 2001).When an operation fails it is very likely that the employees just know the mere fact of its occurrence such as the absence of medicine, but not the reason why it failed and which link of the internal supply chain caused it. Literature for operation management in manufacturing companies includes a map that describes four basic rules that managers rely on to design the functions or tasks that an employee must perform in order to meet the requirements or needs of the client (Nigel Slack, Stuart Chambers and Robert Johnston, 2007). Literature also proposes strategies whose application would make it possible for the companies to produce with higher efficiency what clients order, this by providing their employees all the necessary tools and materials in time (Johnston, R., & Michel, S, 2008). The functions and duties of the workers not only in manufacturing but also in service companies are based on four rules:

- Activities' details. It is necessary that the activities or actions that an employee must perform should be detailed in a specific way in relation to their content, sequences, their timing and their expectation.
- Clear links. The links between the parts of the internal chain otherwise known as internal suppliers with their customers, should be clear. It should be specified in an equal clear way if a duty or function should be performed or no by a particular link in the chain. Everyone should be clear of what task to perform and what not.
- The simplicity of the movement. The route in which they will move materials within the organization, must be clear, understandable and without branches or unnecessary repetition.
- Surveillance improvement. The improvement must start from the lowest level of the organization and implemented under the guidance of an experienced trainer.

The rules of the links and the route of material movement increase the internal integration which is defined as the degree of the coordination procedures for different sectors (the links of the internal supply chain) within the same company in order to meet the client's needs and requests

in the best efficient way. High integration brings low costs, high quality and good performance of the delivery service (Elearn, 2005). In cases when the uncertainty about operations is big the internal integration becomes necessary, as it enables the organization to respond to potential interruptions in its daily operations. Having said all these we understand that the lack of internal integration brings the failure of operations. While the term supply chain refers to the route of movement of the product and service, the term management of the supply chain refers to the interventions to the links of the supply chain and to the staff which is part of it, this in order to define the cost and the values of the amount, how a product moves, the person who performs the movement, the time when the movement is performed, storage and the way it is stored, and how it is made ready for use by the people who have ordered or use it. Everything that happens to a product or a service while it is moving through the internal supply chain regardless if the cost or value lowers or increases is related to the management of the internal supply chain (Bowen, D.E. & Johnston, R., 1999).

METHODOLOGY

This study was conducted at the surgical hospital in the city of Elbasan, Albania as one of the newly built hospital centers. In order to realize it we made observations for two weeks for an average of three hours a day. Another used method was that of interviewing the rest of the staff as part of the internal supply chain. The observation was focused on the nurses' performance while they provided the patients in their pavilion with the required service. We have also observed the staff which was responsible for the distribution of the medicines, equipment and food. At the end the collected data was grouped under the four divisions mentioned above when we talked about the internal supply chain, i.e. activities' details, clear links, the simplicity of the movement and surveillance.

EMPIRICAL FINDINGS

Regarding the *activities' details* of each employee we can say that even though there are descriptions about the functions and responsibilities for various positions, most of the staff goes out of their function frames and by doing so they complicate the operations or lead to delays in their implementation. These factors make up 32% (of a total of 9 kinds) of the total number of factors that cause operation failures. It often happens that nurses are not in their offices and this for different reasons. The relatives of the patient have to look up for them in the other rooms and this causes dissatisfaction among the other patients. Although there is a button in the bed of every patient, the pressing of which activates a buzzer in the nurses' office, it is never used or when it is used the answer is not immediate. It seems that on one hand no one shows this

button to the patient if he/she needs help and on the other hand the staff itself is not sufficiently accustomed to it. The uncontrolled number of the family members who visit the patients and the disrespect towards the visiting hours often becomes a reason of dissatisfaction for the other patients hospitalized in the same room. If you ask whose this responsibility is, all raise their shoulders or the fault remains on the private police hired by the hospital regional directory under which supervision is even the surgical hospital. The necessary medicines for the treatment of a patient are found by themselves but this is a problem which requires other studies. One thing that catches your eyes is the lack of assistive devices such as metal brackets of the serums, which makes the nurse to spend his/her working time doing other tasks which do not belong to him/her, such as searching the metal brackets in the other rooms.

Around 70% of the interviewed staff complains about the lack of tools and devices needed to realize their job properly. During the observation we found out that the nurses' offices were small, there we no computers and the document were only kept in papers. Another reason for dissatisfaction among patients was the lack of job scheduling. In this way in the patient's room or in any other location there were no schedules or timetables for the sanitation workers. If they were called by the relatives of the patients they stopped what they were doing and went to clean that room and the other room facilities even though it was not its turn. The accurate scheduling of their work and that of all the other functions in general, except the emergency would make it possible for the operations not to fail and increase the service performance. *The routes of the movement through the internal supply chain.* Regarding the movement rules we say that 21% of the observed factors (of a total of 6 factors) belonged to this group and the failures happened because of this. They did not put the materials, equipment and the medicines in only one place and the staff had to look up in several different locations to get what they needed to carry out their job. The control and the re-control of the type and the amount of the privately insured medicines by the patient make this process even more difficult. The lack of a computer program for the medicine inventory does not allow them to know what medicines they have and how many of them are left. Their physical inventory means a lot less time for the patients. Another advantage of the use of a computer program about state of the medicines is the ease and speed in their future ordering. This means avoiding delays in the transmission of this information from one of the links of the internal supply chain to the other. *The integration or linking* of different parts of the internal supply chain.

On average, there were found 8 kinds of factors, which make 29% of the total of this group which caused operation failures, so their reason was the level of integration. We conclude from the two divisions of operation failures mentioned above that nurses need more tools, equipment and other materials to perform their jobs well. The uncertainty about the quantity of

the items mentioned above shows a low level of integration. The health problems of the patients of this hospital are very different when moving from one room to the other. All this leads to pavilions needing more tools and devices that require time, technical knowledge and cooperation with many links or subdivisions of the hospital. This complication needing cooperation to provide the service or realize its job sometimes causes operations to fail. The lack of computer programs even in this case causes more delays and opportunities for operation failures the same as in the case of inventory movement. Transmitting the information online, for example from the laboratory to the doctor's office, not mentioning here the fact of making analyses in private laboratories or in laboratories in other buildings, brings delays and often low performance. While we spoke above for the first three groups of the categories of the operation failures, we can say that *surveillance* is a very difficult instrument to be implemented. The operation failures related to the lack of surveillance, which was 18% of the total factors, referred to the working hours, the improvement of coordination in different parts of the chain, staff evaluation, disciplinary measures, lack or no of medicines, etc.

One of the biggest problems of public administration, the one that has gripped even this sector which has a vital importance to each of us, is recognition-based, friendship and sometimes even political background employment for the health service staff. All this hinders the realization of the surveillance and the avoidance of failures which are caused from its lack. The surveillance improvement and its implementation by an experienced staff will remain a task for the future policy, assuming that there will be good will to accomplish it in these important health institutions for all of us.

CONCLUSIONS & RECOMMENDATIONS

Learning from mistakes is sometimes considered more important than correcting them. In order to correct mistakes you must first make known their existence and their experience. The more we talk, complain and study about the health service, whether public or private, the more we will be able to influence the role of the patient but not only. We will also influence the reduction of operation failures which directly affects the quality, efficiency and the performance of the health service we get there. It is indisputable that all this would be insufficient if it did not find support from the other actors of this environment under which these institutions work. However, everyone has its own role in this. This modest paper aims to show that there is a wide range of reasons for operation failures in health service and as such they make the solution even more complex. The observed failures are not only associated with the internal supply chain but they are also associated with other parts such as the provision of medicines by the patients. We have casually mentioned above the problem of buying all the medicines and a part of the

equipment and what we can do is to simply say that transparency in this problem would be an element which will serve not only to avoid any misunderstanding or abuse, but also to add values to the provided service. However this can be seen as an opportunity for further studies in this field.

As a summary we can say that for all the cases of operation failures caused by 28 kinds of factors that we managed to identify, there are some strategies such as those mentioned throughout the paper, whose application would lead to fewer operation failures and higher level of performance. First of all everybody should know that preventing an operation failure is more valuable than its recovery. Secondly, the staff should become aware that the customers' complaints are very important. Other strategies equally important as the previous ones are the training of the staff and giving more responsibilities to the managing staff so that the surveillance takes its full meaning. The need of a computer program system is felt in different links of the internal chain. Its implementation would eliminate some of the recorded types in cases when operations fail.

LIMITATIONS

Despite the conclusion of this modest study it has its own limitations. One of them is the number of hospitals observed. We have observed the operational fails only in one hospital but this kind of study can cover different hospitals in different Albanian cities. Observing only the first shift of the services in a hospital which work for 24 hours can be considered as another limitation of this study.

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