

PROCESS MANAGEMENT IN HEALTHCARE. SANT CAMIL HOSPITAL CASE STUDY

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ABSTRACT

Nowadays due to the crisis, some government measures are aimed at reducing healthcare spending, affecting in some level or another the quality offered. Process management is said to be a useful tool for reducing healthcare costs by improving management without any additional economic investment. That is doing more with the same resources and without reducing the quality offered. In this study an empirical case of a Catalan hospital is presented.

Overall, the usefulness of process management in the healthcare sector is shown and some tips are provided for those managers that want to implement this management system in their hospitals.

This work is also interesting for those managers responsible for the National Healthcare System due to a big question is stated: what would happen if process management was implemented in the whole healthcare system?

Keywords: process management, healthcare, quality, case study.

JEL Codes: M10; I19.

1. INTRODUCTION

In recent decades, the percentage of Gross Domestic Product (GDP) that the different countries of the Organization for Economic Cooperation and Development (OECD) have allocated to health has risen steadily.

At the same time there has been an increase in health spending, among other reasons due to the need to offer higher quality services to patients (Helfert, 2009).

In the Spanish case, health spending has doubled over the decade 1995-2004. And, during the 2004-2006 period, it increased 16% to an amount equal to 5% of nominal GDP in 2006. In 2010 the figure had already increased by one percentage point which, added to the private health expenditure, stands total health spending at 8% of GDP (Rubia Vila, 2011). The causes for this increase are many and varied, in addition to those mentioned, other reasons are: the aging population, the phenomenon of immigration (although during the last year is producing the opposite population movement) or the universal cover care, among others.

With the advent of the crisis the situation has worsened and sustaining the system with its current characteristics is in doubt, as evidenced by the recent measures taken by the Spanish government in this area, oriented to reducing healthcare costs and seeking new forms of financing.

In this scenario, process management is presented, therefore, as a tool for reducing costs while keeping quality at the same level. This aim is very attractive in crisis time, especially in the Spanish case where healthcare services are publicly financed.

Bearing this in mind, the aim of this paper is to present a case study that allows, on one hand, to reaffirm the usefulness and validity of process management in hospitals and, on the other hand, to present the different stages followed in the implementation so that it could be used as a guide for those hospitals that were interested in process management.

2. PROCESS MANAGEMENT IN HEALTHCARE

Process management is a way of organizing and running a business aimed at all kinds of companies that simultaneously pursues an increase in corporate efficiency and an increase in customer satisfaction. The aim is to create added value for the customer by managing the company's processes appropriately.

The origin of process management goes back to the 1980s when, kick-started by Japan, two new management philosophies emerged: Just in Time (JIT) and Total Quality Control (TQC). The two ideologies advocated a production system that is more in touch with customers' needs and the reduction of production defects and waste (Flynn, Sakakibara & Schroeder, 1995).

These two new approaches refocused business activity, redirecting companies towards customer satisfaction and incorporating the concept of quality as a strategic element for competitiveness that affects the quality of the product, service, delivery, price, management etc. (Pérez Fernández de Velasco, 2004).

In this context, the traditional functional structures present in the majority of companies, characterised by being organized into departments with highly specialised

homogenous functions, based on hierarchy, control, formalism and bureaucracy, became insufficient due to their lack of flexibility (Pérez Fernández de Velasco, 2004).

Another reason that led to the emergence and spread of process management was the drastic change in the conditions of the business environment (global markets, increased unpredictable markets, continuous changes, customer orientation, greater concern for quality, more demanding customers).

Therefore, nowadays, process management is part of the basis of the most modern management philosophies (Lean Management, theory of constraints, mass customization) and it is a requirement to comply with many quality certificates (ISO 9000, EFQM, Malcom Balbridge).

As it happened at the turn of the twentieth century with mass production, the automotive industry has pioneered the implementation of this kind of systems (Just in Time production, Lean Management, Continuous Improvement) (Womack, Jones & Roos, 2007; Womack & Jones, 2005). However, as time goes by, more and more companies and sectors are advocating for process management techniques.

The health sector is just one of the sectors where process management is becoming more important for its application in hospitals (Ben-Tovim, Bassham, Bolch & Martin, 2007; Leu & Huang, 2011). In fact, there are numerous studies that present the implementation of process management in hospitals (see (Helfert, 2009; Leu & Huang, 2011; Varkey & Kollengode, 2011; de Mast, Kemper, Does, Mandjes & van der Bijl, 2011; Gemmel, Vandaele & Tambreur, 2008; Bertolini, Bevilacqua, Ciarapica & Giacchetta, 2011)).

In this paper we present a concrete experience of implementation of process management in a hospital, thus providing new empirical research to the field.

3. SANT CAMIL HOSPITAL CASE STUDY

3.1. Case Study

Sant Camil Hospital is located in Sant Pere de Ribes (Barcelona, Spain) and it was founded in 1975. It is a reference hospital in the region and it is integrated within the Hospital Network of Public Use.

The hospital has 159 beds distributed in seven inpatient units: surgery and surgical specialties, orthopaedics, paediatrics, intensive care, gynaecology and obstetrics. In addition, the hospital has several central services such as emergency room, operating rooms, anaesthesia and resuscitation, pain unit, day hospital and outpatient.

Additionally, together with the Sant Antoni Abat Hospital located in Vilanova I la Geltrú (Barcelona, Spain), it integrates the Garraf Health Consortium. In fact, it was the merger of both in 2009 what motivated the implementation of a process management system.

After the merger, the management team realized that each hospital had its own processes and procedures. While they were quite similar, the differences -though small- caused management and coordination problems.

The collection of information was done through several sources. Firstly, the Quality, Planning and Evaluation Manager of the hospital was interviewed. Secondly, a

visit to the hospital was made in order to observe some of the most visible results derived from process management implementation. Thirdly, to complement the information from the interview, some information was taken from the Strategic Plan and other documents that the Quality Manager provided.

3.2. Implementation phases

Once the decision of implementing process management was taken, the phases followed were: setting of the vision, mission and values for both hospitals; training; identification and description of processes; establishment of indicators and improvement.

Below we briefly describe each of the phases:

- Setting of the vision, mission and values for both hospitals

When it comes to establish the three terms, it was decided to do it as participatory as possible. Thus, members of several groups from both hospitals (doctors, nurses, management team...) worked together to establish the mission, vision and values. The formation of these groups improved the existing working relationships between members of the two hospitals that, until the merger, had belonged to competing hospitals. As a result the implementation process in the later stages was favoured.

The results of these meetings were set out in the Strategic Plan of the hospital, which is revised annually and available on its website (<http://www.csg.cat/nosaltres/pla-estrategic/>).

Precisely one of the main priorities set out in the strategic plan was the analysis and definition of processes.

- Training

The next step was to train representatives of the different groups that worked in both hospitals. Six groups were established, divided in turn in different teams. These teams gathered people from different professional groups (doctors, nurses ...), working in the same process.

Training was given in two phases. In the first phase theoretical concepts of quality (evolution, Deming improvement cycle, ISO 9000:2000, EFQM ...) and process management (key objectives, process owner, process map, procedures, graphical representation of processes, process improvement, indicators ...) were taught. The aim was to give participants a basic knowledge to enable them to operate better and also establish a common working language to avoid misunderstandings and waste time at later stages.

The second stage of training was practical oriented. Each team had to apply the knowledge acquired and proceed to the definition of the actual process in which they worked.

- Identification and description of processes

The first description of the process undertaken by the various teams was reviewed by the quality management team. They were responsible for checking that the information was complete and, if it was not correct, they asked the responsible team to complete the description with the appropriate information.

The description of each process should include the following information:

- Date of the document
- Start and end of the process
- Customers and suppliers
- What is done in the process (target output)
- How the process is carried out (method)
- Process indicators
- Standard or reference value of these indicators
- Frequency of review or indicators

- Establishment of indicators

As it was noted in the previous section, the information about the process should contain information on process indicators. The type and number of indicators was not previously established but each team, depending on their experience, should identify as many indicators as they considered. However, hospital quality managers checked that among the indicators established were those required by the Catalan Health Department.

Since the hospital had accreditation from the Catalan health system, some indicators were already identified and automatically measured. In this case the data were entered directly into the scorecard. The scorecard had been specifically designed and created to meet the specific needs of the centre. On the other hand a newly defined set of indicators which were not yet computerized were traditionally controlled. And finally, there were some process indicators that are not yet controlled. In these cases, actions to improve the processes in question have focused precisely in this sense.

- Process improvement

Once the processes were identified and described, the next objective of the hospital was to improve them. In order to do it, the management team decided to use Lean Management philosophy. The first contact they had with this management philosophy went through his manager who had previously had a successful implementation experience at another centre.

Their first decision was to form a "facilitators group". This group would receive full training on Lean Management and would be responsible for assisting and supporting the other members when implementing Lean Management. The training this time, unlike in the previous stage, would be delivered by an external advisory group specialized in Lean Management in different sectors.

The group of facilitators was integrated by 16 people belonging to different services of the hospital and also to different categories. All but two have been chosen by top management because they were considered the best suited to receive training and act as drivers. The other two people have signed the group on a voluntary basis because they, due to personal circumstances, knew the Lean methodology and its advantages

and they were very interested in participating in this new experience. Having people personally involved is a good thing because their enthusiasm is an invaluable tool in persuading the other members and involving them in the new philosophy.

Currently the hospital is in its training phase so this is the last phase to explain so far. However, in parallel to training, they have been making some improvements focused on reducing the existing stock using a KANBAN system and analysing the surgical time. This analysis consisted of breaking down all the activities performed by professionals from the surgeon did the last stitch until the surgical incision of the next patient was done, calculating the time required and performing a precedence diagram to organize the activities.

3.3. Barriers and benefits

The way through process management and process improvement has not been easy and it has required that all members of the hospital, especially those who have been involved in work teams, to make efforts and to invest time to get it. In addition, throughout the implementation some obstacles that have impeded or delayed the process have been faced.

Conducting a personal interview with the two highest quality managers of the centre, let us know that the biggest barrier encountered was the lack of time derived from daily operations. The second barrier was the internal resistance to change, derived in part from the existence of two cultures and two different forms of management. And the third barrier was the traditional structure of the company.

Despite these obstacles, the hospital managed to go ahead with the implementation and, although its early development does not allow us to do more detailed analysis of results, quality managers have managed to detect some improvements.

One of the most important ones derives, precisely, from stock control that has resulted in a remarkable reduction of inventories. For example, in the area of pharmacy stock value has been reduced from €1.2 million to €0.4 million, maintaining the same level of care and the same level of quality.

The other improvement, worthy of mention, was related to the analysis of the surgical process time. After the analysis, some improvements were made that reduced the average surgical time about 62.5%. This has led to an increase of 12% on average the operating rooms occupancy across specialties, a factor that has helped to reduce the lists of people who are waiting for surgery.

Besides that improvements, a positive evolution on the indicators included in the scorecard have been detected. With these initial results, after the training period, its aim is to focus on process control and improvement.

4. CONCLUSIONS

Process management, initially used in the manufacturing sector, is becoming increasingly common in services, and specifically in hospitals.

In crisis time, where health care budget cuts are common, it is interesting to know a management system that allows us to do more with the same resources by doing a more efficient use of them and always focusing on the patient.

The implementation process is not easy and requires active participation from all members of the organization. It is imperative that managers and middle managers support the initiative from the beginning and encourage other employees to actively participate. As in the case study presented, the existence of a group of facilitators is recommended.

Given the undeniable role that employees play in the success of the implementation, it is necessary that they are aware of the usefulness of process management and its benefits. At this point training is a key element. Due to reluctance to change is one of the main barriers to implementation, the training process should help employees discover the benefits of process management system, so that they participate knowing why and not just out of obligation.

It is true, however, that it is sometimes a matter of first seeing then believing, so it is advisable to make simple improvements that show the potential benefits of the system in the initial stages.

On the other hand, although it is true that process management does not involve new economic investments, it takes time. The management team, therefore, must be willing to invest and to let other members of the organization invest their time.

The case presented validates the usefulness and application of process management in the health sector leading to the following question What if, instead of being used in isolation in a hospital, it is applied to the entire health system? Obviously the efforts would be much greater, but so be the benefits. The process would be more complex but potential benefits may deserve it, especially in a scenario like the current one where the sustainability of the system is in doubt. Process management in combination with other enhancement techniques such as Lean Management, as set out above, could alleviate the effects the crisis is having on the health system. No claim is made here that this is a panacea as there are more fundamental causes of the health system, however, process management can be a help, the beginning of change.

One limitation of this study is that the full cycle of implementation has not been analyzed because it is still not complete. This causes that the potential advantages of process management have not been fully detected yet in this study, although this is a sign of the great potential that remains untapped.

Therefore, future research lines will be aimed at analyzing the results in greater depth and learn about the next phases of implementation. This will be achieved using a survey that will be conducted among hospital staff involved in improvement teams. From their responses, we will be able to obtain a more comprehensive view of the hospital experience exposing, in addition to the phases of process management implementation, the benefits, barriers and drivers associated with it.

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