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## **An Application of ABC Analysis in the Clothing Service at Centro Hospitalar Cova Da Beira (CHCB) - Portugal**

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# ECONOMÍA DE LA SALUD ¿DÓNDE ESTAMOS 25 AÑOS DESPUÉS?

XXV JORNADAS DE ECONOMÍA DE LA SALUD

Barcelona, 13-15 de julio 2005

## Titulo

An application of ABC analysis in the clothing service at Centro Hospitalar Cova da Beira (CHCB) - Portugal

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## Palabras Clave

Hospital management; materials management; ABC analysis

## Introduccion

Cost reduction, along with the satisfaction of patient's and other users' needs, is one of the major concerns of industries and organizations that provide health care services. Hospitals are complex organizations that deal with a wide range of materials. These materials require adequate and sometimes specific management approaches. The nature of their customers (patients and other users) asks for a rigorous control of these materials. One of these materials, hospitals' linen, requires a detailed control system.

Hospital's linen is crucial for a good overall performance of any hospital. This material can be used, not only as a protection against diseases and infections, but also as a way of providing a more comfortable patient stay. It can even be essential to their recovery. Another crucial aspect is its use as an auxiliary in medical tasks.

Clothing services are responsible for managing this type of materials. Consequently, they are required to manage them in an optimal manner in order, not only to reduce costs, but also to satisfy patients and all other hospital users.

The experiment reported in this study was designed with the objective of improving the management of this material. Consequently, it will enable the clothing service to provide services capable of meeting customers' needs and requirements.

## Objetivo

The major objective of this study is to develop a stock management system for the clothing service at C.H.C.B., S.A. – Hospital Pêro da Covilhã, which will contribute to a better performance of this service.

## Metodos

Stock management approach that best fits the reality of clothing service, and other similar services,



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is the method of periodic review with service level. In fact, there is a daily period (daily orders), a fixed period, and the supplier is always the same.

This method allows the stipulation of the amount of clothes to be ordered for each service that uses hospital's linen. Consequently, it allows the management of existing stock in a better way.

Before the application of the method, in order to know which products require more attention, regarding usage and washing costs, an ABC analysis was performed. Based on this analysis, bed sheets proved to be the most important product, among the different products provided, every day, by the clothing service.

The study was developed in the Female Medicine Department. This unit was chosen because it is the one that have the highest daily usage rate.

## Resultados

It was possible to conclude that, in the department under study, bed sheets are also the product that requires closest attention. However, it is important to realize that the result would not be the same for all the departments of the hospital. In fact, different departments have different types of usage. For instance, Genecology department requires a large amount of night-gowns. Consequently, it is reasonable to assume that different results could be observed, if the study was applied to different units.

Being bed sheets classified as the Class A product by the ABC analysis performed in the Female Medicine Department, it was decided to apply the stock management method only to this product. Based on historical data it was computed 281 bed sheets as the amount to be ordered every day. This amount seems to be higher than the amount of bed sheets that has been delivered. This happens because the method takes into account a higher safety stock. This safety stock is extremely important for a good performance of the department under study.

If the method is to be applied to all the departments, the number of bed sheets currently available would not allow a daily delivery in the recommended amount. Consequently, it was not possible to fully apply the proposed method and draw the right conclusions. However, it is safe to say that, if fully applied, the method would make it possible to satisfy most of the unexpected needs. In the case of Hospital management, the satisfaction of "unexpected" needs is essential for a good performance.

Moreover, this method makes it possible to take a better control of existing stock. This is the reason why it makes sense, for a hospital, to put it into practice. Its implementation at all units/departments and for all types of clothes would lead to a more meticulous control of the whole process of clothes' delivery and to the control of the products that are kept in store.



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## Conclusiones

Based on these results, it is possible to say that the practical application of this study would be very valuable to the hospital, because it would guarantee the supply of enough clothes to the different departments. Its application to all the existent products would make it possible to manage the stocks in a permanent and efficient way. It would make the clothing service a more efficient and functional one. This work played an important role in the clothing service because it opened the way for future improvement concerning stock management and, consequently, performance improvement of the department.