

Kanban Inventory System on Healthcare

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Abstract— Kanban inventory system in healthcare is the system that focuses on timely replenishment of items required in the industry. The purpose of this small piece of research paper is to know the effectiveness of the Kanban inventory system in health care industry. The method of replenishment under Kanban inventory system is discussed with the help of simple example. The process of the system with the help of graph is also elaborated. The advantages of Kanban inventory system in the healthcare industry are explored with some of the disadvantages too. In conclusion, concluding remarks and comments are included. This research paper is very useful in understanding the complexities of inventory management in simpler and easy way. This work would be helping to understand about the topic easily.



1 INTRODUCTION

Kanban inventory system is very effective in bringing in the efficiency in the inventory system. In healthcare field, the inventory is very important part of the process. It calls for specific and right number of items to be ordered so that the efficiency of the system can be ensured. If the order is placed for extra quantity then efficiency will be affected and too little ordering would do nothing but frustrate the whole system in any health care department. Kanban inventory system is the solution to this problem. (Corominas, 2011)

This is time-based management. This term of Kanban is Japanese terminology for processing the items in ordering. They value time and they ensure efficiency in their operations. But it is viewed by some that this system is widely accepted across the globe but has not been adopted completely outside of Japan.

2 Describing the method that were used

Kanban inventory system starts with two bins. When one of these two bins gets empty then the person puts

that empty bin on the top shelf and start using another bin that is still of products. The empty bin is the signal that the need of replenishment is there. Then material management scans the empty bin and starts the process of replenishment by making an order. Proprietary software specifies the quantity needed to refill that empty bin. This proprietary software can be altered according to the change in demand through software algorithms and analytics. Then these empty bins are refilled and replenished bins are moved to the patient floors. These refilled bins are placed back to the bins that are being used presently. At the time of being its empty, the process again starts. (Manos, Sattler, & Alukal, 2006)

In simple words, the Kanban inventory system flows from grass root level to the upstream that triggers the process of replenishment that is needed. A card is placed in empty bin is placed to make noticed that this bin is to be refilled. This signals the concerned person

to put the empty bin and start the process of replenishment.

3 This Advantage and disadvantage of using this method

The advantage of the Kanban inventory system in health care is that hospitals are not very much renowned for its efficiency. The managers in other industries feel it difficult to get to the hospitals for solving the problems in inventory management. This inventory system is simple and efficient enough that it has finished the bottlenecks in inventory management. (Krar, 2012)

On the other hand, the healthcare industry is very crucial in inventory management. If the required product is not in the stock then the consequences may be grave. Patient might be died due to late procurement of the required stock. In this scenario, kanban inventory system helps to make sure that the required items are in the stock. Kanban is just like the limit on the inventory piling up. When the inventory will be called only when it is needed then the process can be saved from the inefficiencies. These inefficiencies are due to more spaces required for the inventory, large amount of cash needed, high handling costs, and workforce needed to handle that inventory. Kanban inventory

system has reduced the work-in-progress inventory. Due to this reduction, lead-times are also reduced. Thus, it saves time of processing the inventory ordering in healthcare industry. (KÄFER, 2007)

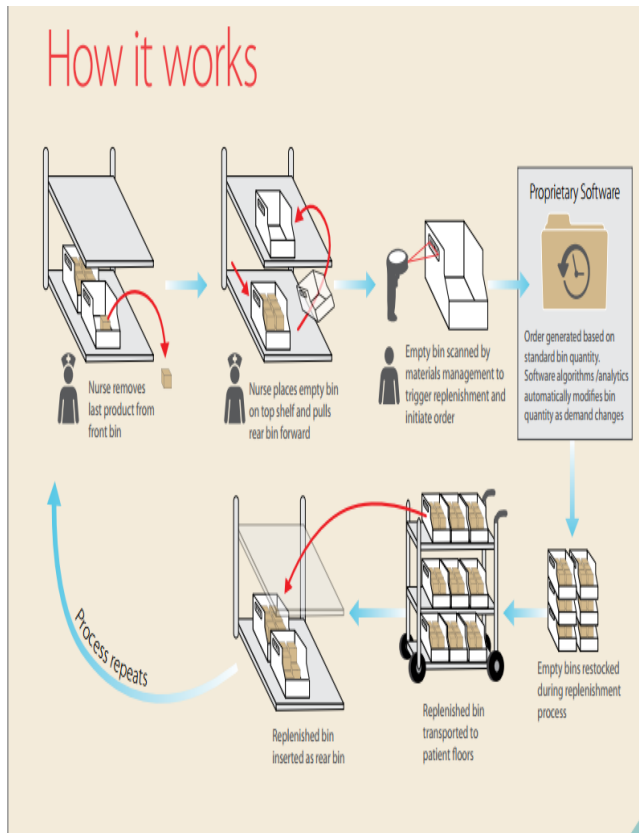
Then other benefits emerge from the little inventory. Little inventory is easy to manage. So the damage can be brought to the minimum and little amount of scrap produces. As this system involves the grass root level of the health care industry, therefore it involves the intake of all employees. A nurse can place empty bin on the shelf of the hospital and repeat the process that can diagnose the errors in the system. In other words, shop-floor people help the health care industry in attaining top-level management objectives. (KÄFER, 2007)

Anyhow, in the circumstances of fluctuating demand it cannot be as effective as at the time of stable demand. Over reliance on Kanban, system can break down the whole process. Because a simple mistake by anybody can disturb the system. Therefore, proper supervision is needed. If diverse set of products is required then this cannot function well unless separate Kanban card is issued to every product. (KÄFER, 2007)

4 Provide a small Example with graph

Following graph illustrates the process of Kanban in-

ventory system. At first place, the nurse puts empty box on top of the floor. Then that box is scanned and capacity of the box is assessed through the software. After that, the process of replenishment starts until the patient floor.



5 Conclusion and comment

In concluding remarks, I would like to say that Kanban system is simple from of processing the materials ordering. It must be used in health care industry, but I have included some of the disadvantages too. Therefore, before applying, these limitations must be in mind. The process is simple, it can motivate the employees in health care industry as they participate in

such an important decision making process. They live in tense environment of hospitals; therefore, their motivation is as important as the processes in the hospital are. Such simple solutions at workplaces must be encouraged so that the efficiency can be achieved. In final comment, I would suggest to apply this simple inventory system through proper and active management. If the Kanban inventory system is perfectly managed, then it is useful otherwise, it can cause problem like any other system.

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