Changes induced by the implementation of the ABC (Activity Based Costing) method for drug supply in a French university hospital

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INTRODUCTION

➜ Drug supply and stock management are the mains missions of the hospital pharmacist.

➜ Economic requirements expected by our institution have led us to consider the reduction of the value of our drugs stock within the pharmacy

➜ Thereby we decided to implement the **ABC** (Activity Based Costing) method for drug supply. This method, applied to purchasing, is used to classify products considering their impact on the stock value in order to optimize costs and amounts of drugs stored in the pharmacy

OBJECTIVES

➜ To present the implementation impact of the ABC method on stock value, on stock coverage and on the number of order lines after 4 months
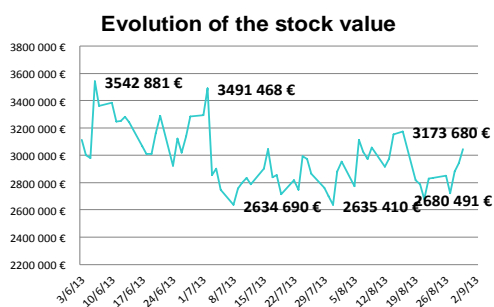
METHOD

With the help of an expert from the National Support Agency in the performance of health-care facilities and medico-social (ANAP), about 1800 references of our drug formulary have been divided into 3 classes:

In theory :

❖**CLASS A** represents **20 %** in quantity and **80 %** of the stock value
(examples : Candidas ® 50 mg IV, Granocyte ® 0,105 mg Syringe)
As possible, **class A drugs** were ordered **twice a month**

❖**CLASS B** represents **30 %** in quantity and **15 %** of the stock value
(examples : Prograf ® 5 mg capsule, Norvir ® 100 mg tablet)
As possible, **class B drugs** were ordered once a month

❖**CLASS C** represents **50 %** in quantity and **5 %** of the stock value
(examples : Seresta 50 mg ® tablet, Cordarone ® 200 mg tablet)
As possible, **class C drugs** were ordered every 45 days
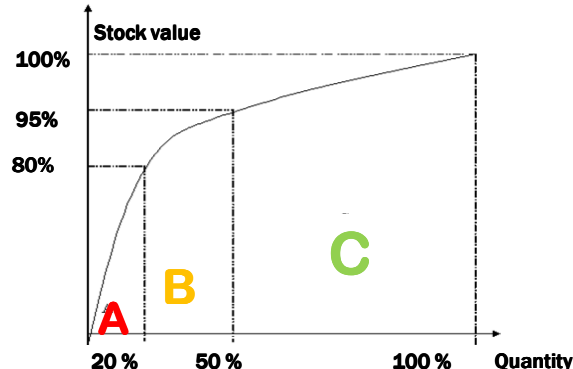
Simultaneously indicators, as number of order lines or coverage stock were used to follow up the procedure.
This method was applied for drug supply from June to September 2013 to all drugs in particular the class A drugs, except medicinal products derived from human blood or plasmas (n=93).

RESULTS

Evolution of the stock value

3542 881 €   3491 468 €   3173 680 €
2634 690 €   2635 410 €   2680 491 €

❖ After two months of implementation of the ABC method, the average stock value decreased by 7.8%

❖ Stock coverage decreased from 21.8 days in May to 11.7 in July for expensive drugs and from 46.9 days in June to 30.1 in September for other drugs

❖ At the same time, the number of order lines to manufacturers has risen

Implementation of the ABC method

	March	April	May	June	July	August	September
Nb order lines	1499	1601	1417	1493	2003	1896	2124
Stock coverage of expensive drugs (days)	18,9	17	21,8	17,4	11,7	13,7	12,7
Stock coverage of others drugs (days)	36,6	36,6	39,8	46,9	32	33,6	30,1

DISCUSSION

❖ Since September, we established of a new indicator (service rate) in order to follow the impact of this method on stock outs.

❖ Some class A drugs were ordered 4-5 times a month. This result highlights the fact that the ABC method is not relevant for all drugs : indications, posologies and number of patients are unpredictable. For example, antidotes have to be stored despite their cost and their low consumption.

❖Increasing the number of orders raises the time dedicated to ordering, receipting and storage. It requires a significant human time for technical analysis of consumption or any stock outs.

❖ This management approach has helped us to reduce stock value consistently but we will also have to include cost acquisition in the global approach for drug supply chain.