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Drug product management is a complex organized process; which consists of preplanning for drug requirement, procurement, inventory control, storage and distribution.

The objective of this 2-phase study was to determine the exact problems regarding the drug product management, proposed and implemented problem solving methods, and evaluated the effectiveness of these methods. The study was performed between March and December 1993 at Phramongkutkiao Hospital.

First-phase study employed questionnaires and recorded review as data collection methods. The analysis results revealed that during the 2-month period there were 420 items that were out of stock, leading to a loan of 374 times. At the end of fiscal year 1993, 8 items were outdated (equivalent to 71,228 baht), 22 items were deadstock (equivalent to 293,437.50 baht), 38 items were overstock (equivalent to 3,902,760 baht). Furthermore, there was a shortage of storage area, 53.39 cu.m. compared to 171.97 cu.m. required.

Strategies designed to overcome the above problems were 1. introduction of computerized inventory control system, 2. setting a minimum stock level of 60 days, 3. coordinating work process between purchasing and stock divisions, 4. revising specific drug request forms.

Second-phase management showed that there were several improvements in drug product management. These included the increasing in number of drug items purchasing requests from 390 to 790 during the period of two months, reduction in loaning from 374 to 24 times and reduction in out of stock items from 420 to 136 items per two months. After the computer system had been introduced, it was found that the number of storage personnels could be reduced from 3 to 2, reduction in the steps of drug receiving process from 5 to 4, reduction in the time spent in receiving process from 7.74 to 1.74 minute per item. Furthermore, computer system could present 235 items of stock requests as compared to 100 items using the manual stock record card system at the same period of time. Moreover, computer generated stock requests could be accomplished 16 days less on average. The frequency of drug requests was reduced from 10.41 to 4.28 times per day. The number of drug requests was increased from 10.55 to 25.45 items per request form. The difference in time spent in distribution process was not statistically significant.

The results of this study clearly indicated the advantage of using a computer system coupled with a well-designed coordinating system in drug product management process, particularly in inventory control.