A DYNAMIC CONTROL SYSTEM FOR HOSPITAL INVENTORIES

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This paper offers an approach to the inventory problem involving stochastic demand and stochastic lead time when only empirical distributions of these random variables are available. The proposed inventory model utilizes experimental optimization in a unique fashion to solve this problem.

Through the use of Monte Carlo simulation and a modified non-linear programming approach, an expected total cost objective function is minimized by the selection of appropriate reorder points and reorder quantities. The model is shown to be dynamic in nature and suitable for control of large inventories. The technique has been applied to several hospital inventory items and sample computations are included in the paper.

DISTRIBUTION COMBINING PROGRAM

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The Distribution Combining Program is a set of algorithms that evaluates the probability distribution of the sum, difference, product, or ratio of two random variables with specified distributions. The method allows for correlation between the two input variables. The input