ABSTRACT

ELECTION OF EFFECTIVE AND EFFICIENT METHOD OF DRUG INVENTORY PLANNING BETWEEN RIIL CONDITION, EOQ, AND MMSL
(In Terms of Opportunity Cost and Opportunity Loss of Stagnant and Stockout Drug at Pharmacy Installation of RSUD RA Basoeni Kabupaten Mojokerto)

A poor drug supply planning system is resulting to inefficiency of budgeting, overrunning procurement and storage cost, higher risk of damage and expire drug products. The problem observed in this study is the high inventory cost due to stagnant drug products 90,8%, stockout drug products 2,8%, expired drug products 6,4% in the period of January to December 2014 in Pharmacy Installation of RSUD RA Basoeni. This study aims to determine the most effective and efficient inventory planning between EOQ and MMSL. The calculation of losses due to stagnant and stockout drug inventories using the approach of opportunity loss and opportunity cost assumptions. This research is an observational descriptive research with observation on each stage of analysis on real condition, simulation with EOQ, and simulation with MMSL. This study resulted in percentage of normal drug stocks in real condition 7%, in simulation with EOQ method equal to 34%, and in simulation with MMSL method equal to 20%. Total value of opportunity cost and opportunity loss for drug stagnant and stockout in real conditions is Rp 631.855.077, in simulated condition EOQ is Rp 60.795.372, in simulated condition with MMSL is Rp 88.804.164. The percentage of normal drug stock is the parameter of the most effective method of drug inventory planning. The loss value resulted from the analysis of opportunity cost and opportunity loss of stagnant and stockout drug products, is the parameter of the most efficient method of drug inventory planning. The result of this research is the recommendation of EOQ method to be chosen as the most effective and efficient method of drug inventory planning that can be used in Pharmacy Installation of RSUD RA Basoeni Kabupaten Mojokerto.

Keywords: opportunity loss, opportunity cost, Economic Order Quantity, Minimum-Maximum Stock Level

ABSTRAK

PEMILIHAN METODE PERENCANAAN PERSEDIAAN OBAT YANG EFEKTIF DAN EFISIEN ANTARA KONDISI RIIL, EOQ DAN MMSL (Ditinjau dari *Opportunity Cost* dan *Opportunity Loss* Obat *Stagnant* dan *Stockout* di Instalasi Farmasi RSUD RA Basoeni Kabupaten Mojokerto)

Sistem perencanaan persediaan obat yang lemah mengakibatkan pemborosan anggaran, membengkaknya biaya pengadaan dan penyimpanan, meningkatnya risiko obat rusak dan kedaluwarsa. Masalah persediaan obat di RSUD RA Basoeni adalah tingginya obat *stagnant* sebesar 90,8%, obat *stockout* sebesar 2,8%, obat kedaluwarsa sebesar 6,4% periode Januari–Desember 2014. Penelitian ini bertujuan untuk menentukan metode perencanaan persediaan yang paling efektif dan efisien antara kondisi riil, EOQ dan MMSL. Perhitungan kerugian akibat persediaan obat *stagnant* dan *stockout* menggunakan pendekatan asumsi *opportunity loss* dan *opportunity cost*. Penelitian ini adalah penelitian deskriptif observasional dengan melalui pengamatan terhadap setiap tahapan analisis pada kondisi riil, simulasi dengan EOQ, dan simulasi dengan MMSL. Penelitian ini menghasilkan persentase persediaan obat normal pada kondisi riil sebesar 7%, pada simulasi dengan metode EOQ sebesar 34%, dan pada simulasi dengan metode MMSL sebesar 20%. Nilai total kerugian hasil analisis *opportunity cost* dan *opportunity loss* obat *stagnant* dan *stockout* pada kondisi riil adalah Rp 631.855.077, pada simulasi dengan metode EOQ adalah Rp 60.795.372, pada simulasi dengan metode MMSL adalah Rp 88.804.164. Persentase persediaan obat normal merupakan parameter metode perencanan dan pengendalian persediaan yang paling efektif. Nilai kerugian hasil analisis *opportunity cost* dan *opportunity loss* obat *stagnant* dan *stockout* merupakan parameter metode perencanan dan pengendalian persediaan yang paling efisien. Penelitian ini menghasilkan rekomendasi bahwa metode EOQ terpilih sebagai metode perencanaan persediaan yang paling efektif dan efisien yang dapat digunakan di Instalasi Farmasi RSUD RA Basoeni Kabupaten Mojokerto.

Kata kunci: *opportunity loss*, *opportunity cost*, *Economic Order Quantity*, *Minimum-Maximum Stock Level*