

INTISARI

Latar belakang: Salah satu permasalahan sistem inventori obat di RSUD Ajibarang adalah kekosongan obat (46.0%) pada tahun 2017 dipicu berbagai permasalahan dari siklus manajemen obat. Metode perencanaan yang diterapkan di Instalasi Farmasi RSUD Ajibarang adalah dengan metode konsumsi, dengan pengendalian persediaan masih manual dari kartu stok namun dirasa kurang adaptif terhadap probabilitas dan variabilitas kondisi baik di rumah sakit, *supplier* maupun masyarakat.

Tujuan: Mensimulasikan metode perencanaan dan pengendalian persediaan obat yang paling baik untuk Instalasi Farmasi RSUD Ajibarang Tahun 2019

Method: Penelitian *observational design deskriptif analytic* menggunakan study *cross sectional*. Data penelitian berupa data sekunder obat di Instalasi Farmasi RSUD Ajibarang tahun 2017-2018 dan Januari – Juni 2019. Sampel penelitian adalah semua obat-obatan golongan A pengadaan e-katalog berdasarkan penggolongan ABC. Simulasi metode perencanaan dengan metode *forecasting* serta menentukan pengendalian persediaan obat dengan metode *periodic review policy P system dengan back order*, *continuous review policy Q system dengan back order* dan *Hybrid system*. Hasil indikator efisiensi dan efektivitas pengadaan obat seperti frekuensi *stock out*, jumlah *stock out* dan *total inventory cost* akan digunakan sebagai pembanding *existing system* dan penelitian terdahulu.

Hasil dan Pembahasan: Metode *forecasting* yang memiliki MAD terkecil adalah metode *Additive Decomposition*. Metode pengendalian persediaan dengan frekuensi dan jumlah *stock out* yang paling kecil adalah *Periodic Review Policy P System dengan Back Order dan Hybrid System* dengan *review period* 1 bulan di mana terjadi *stockout* sebanyak 5 kali dengan total 9086 unit, sedangkan yang paling besar adalah *Continuous Review Policy Q System dengan Back Order* di mana terjadi *stockout* sebanyak 90 kali dengan total 80759 unit. Metode pengendalian persediaan dengan ongkos inventori total paling kecil adalah *Continuous Review Q system dengan Back Order* sebesar Rp 1.647.230.084,67, sedangkan yang paling besar adalah *Hybrid System dengan review period* 1 bulan sebesar Rp 2.084.526.547.14. Metode terpilih yaitu *Hybrid System review period* 3 bulan disimulasikan dan dibandingkan dengan pengadaan dan pengendalian persediaan *existing*. *Hybrid System dengan review period* 3 bulan memiliki ongkos inventori total, frekuensi dan jumlah *stock out* yang lebih kecil dibandingkan metode pengadaan dan pengendalian persediaan *existing*.

Kesimpulan dan Saran: Usulan sistem pengendalian persediaan yang dapat diterapkan untuk Instalasi Farmasi RSUD Ajibarang adalah *Hybrid system dengan review period* 3 bulan karena memiliki jumlah, frekuensi *stock out* yang tidak besar dan ongkos inventori yang kecil. Metode ini diharapkan menjadi metode yang mengakomodir persediaan, variabilitas *demand* dan *lead time* agar tidak sering mengalami *stockout* namun tetap efisien pada pengadaan obat melalui e-katalog.

Kata kunci: *simulation of inventory method, total inventory cost, periodic review policy P system dengan back order, continuous review policy Q system dengan back order, Hybrid system*

ABSTRACT

Background: One of the drug inventory system problems and RSUD Ajibarang is drug shortage (46.0%) occurred in 2017. It was triggered by various problems coming from drug management cycle. The plan method applied in pharmaceutical installation of RSUD Ajibarang was consumption method with a manual inventory control through a stock card. However, it was considered to be less adaptive toward the probability and variability of hospital, supplier, and community.

Objectives: To stimulate the best plan and control method of drug supplies 2019 in RSUD Ajibarang.

Method: Method of the research is observational descriptive-analytic design using a cross sectional study. Data of the research was the form of secondary data of drugs in RSUD Ajibarang's Pharmaceutical Installation 2017-2018 and January-June 2019. Sample of the research was e-catalog of A class drugs. Simulation of plan method was a forecasting method. Determination of drug inventory control was using the Hybrid System and the method of periodic review policy Q system with Back Order. Results of efficiency indicators and effectiveness of drug procurement such as frequency of stock-out, quantity of stock-out, and total inventory cost were used as the comparison of existing systems and previous research.

Result. The forecasting method that has the smallest MAD is the Additive Decomposition method. The smallest inventory control and total stock-out method is the Periodic Review policy P System with Back Order and Hybrid System with 1-month review period in which stockout occurs 5 times with a total of 9086 units, while the biggest is Continuous Review Policy Q System with Back Order where there are 90 times stockout with a total of 80759 units. Inventory control method with the lowest total inventory cost is the Continuous review Q System with Back Order of Rp 1,647,230,084.67, while the largest is the Hybrid System with a 1 month review period of Rp 2,084,526,547.14. The chosen method, Hybrid System with a 3-month review period, is then simulated and compared with existing procurement and inventory. Hybrid System with a 3-month review period has total inventory costs, frequency and the smaller amount of stock out than existing procurement and inventory.

Conclusion. The suggested inventory control system that can be applied in RSUD Ajibarang's Pharmaceutical Installation is the Hybrid System with 3-month review period. The Hybrid System has a large stock-out quantity, stock-out frequency, and low total inventory cost. This method is expected to be a method that accommodates inventory, demand variability and lead time so as not to experience frequent stockouts but remains efficient in drug procurement through e-catalogs.

Keywords: *simulation of inventory method , total inventory cost, periodic review policy P system dengan back order, continuous review policy Q system dengan back order, Hybrid system*