ABSTRACT

Implementation of The Kanban System in Reducing Stagnant Medicine Supplies in Pharmaceutical Installation RSU Anwar Medika

Background: Pharmacy installations in managing medical supplies, medical devices, and consumable medical materials must be optimal. Inventories may not be stagnant or stockout. One of the Losses due to stagnant drug supplies was an enlarged drug storage cost and disruption of service operations.

Research methods: This experimental research aimed to provide a solution to the high value of stagnant category A drug supplies at Anwar Medika Hospital. The design of this study was a pre-test post-test control group design. Samples were taken from 96 drugs which experienced stagnation in categories A and B then 82 samples obtained. Samples were divided into two groups, the intervention group with Kanban cards and the control group with 41 drugs per group. The Kanban system started by determining the lead time, stock period, safety stock, reorder point, and order quantity for each drug. The data used was the last month's sales history. After each value was determined, socialization was carried out to all pharmacists. Then Kanban cards are installed in all pharmaceutical installation units, included pharmaceutical logistics, outpatient depots, inpatient depots, and central surgical installation depots.

Results: Drugs in the intervention group had 53.7% (22 drugs) changed from stagnant to Normal, and 46.3% remained stagnant. In the control group, 31.7% (13 drugs) were normal, and 58.5% (24 drugs) remained stagnant, also 9.8% (4 drugs) changed to stockout, after the intervention period. The Fisher's Exact Test was conducted and a value of 0.022 was obtained with $\alpha = 5\%$.

Conclusion: From this study, it is concluded that there is a difference in the condition of stagnant drug supplies, between the groups that performed Kanban intervention and the control group.

Keywords: Kanban, stagnant, inventory

ABSTRAK

Penerapan Sistem *Kanban* dalam Menurunkan Persediaan Obat yang *Stagnant* di Instalasi Farmasi RSU Anwar Medika

Latar Belakang: Instalasi Farmasi dalam mengelola persediaan obat, alat kesehatan, dan bahan medis habis pakai harus optimal. Persediaan tidak boleh stagnant maupun stockout. Kerugian yang didapat akibat persediaan obat *stagnant* berupa biaya persediaan obat yang membesar serta terganggunya kegiatan operasional pelayanan.

Metode Penelitian: Penelitian ini adalah penelitian eksperimental yang bertujuan untuk memberikan solusi terhadap tingginya nilai persediaan obat kategori A yang *stagnant* di RSU Anwar Medika. Desain penelitian ini adalah *pretest-posttest control group design.* Sampel diambil dari 96 obat yang mengalami stagnant pada kategori A dan B kemudian didapatkan 82 sampel. Dari 82 sampel tersebut dibagi dua kelompok, yakni kelompok intervensi pemberian kartu Kanban dan kelompok kontrol. *Kanban* dimulai dengan menentukan *lead time, periode stock, safety stock, reorder point,* dan *order quantity* masing-masing obat. Data yang digunakan adalah riwayat penjualan bulan lalu. Setelah ditentukan masing-masing nilainya, dilakukan sosialisasi kepada seluruh petugas farmasi. Berikutnya kartu Kanban dipasang di seluruh unit instalasi farmasi, yakni di logistik farmasi, depo rawat jalan, depo rawat inap, dan depo instalasi bedah sentral.

Hasil: Obat Pada kelompok intervensi, 53,7% (22 obat) berubah dari *stagnant* menjadi Normal, dan 46,3% tetap *stagnant.* Pada kelompok kontrol, 31,7% (13 obat) menjadi normal, dan 58,5% (24 obat) tetap *stagnant*, serta 9,8% (4 obat) berubah menjadi *stockout*, setelah periode intervensi. Dilakukan Uji *Fisher's Exact* dan diperoleh nilai p sebesar 0,022. Digunakan α sebesar 5%.

Kesimpulan: Dari penelitian ini, dapat disimpulkan bahwa terdapat perbedaan kondisi pasokan obat *stagnant*, antara kelompok yang melakukan intervensi Kanban dan kelompok kontrol.

Kata kunci: *Kanban, stagnant*, persediaan