ABSTRAK

IMPLEMENTASI PENDEKATAN *LEAN MANAGEMENT* PADA PROSES PENGADAAN PERSEDIAAN DI RUMAH SAKIT PUSAT PERTAMINA

Latar Belakang Alokasi dana besar pada persediaan berpotensi menimbulkan *idle money* dan biaya yang tidak sedikit untuk pemesanan dan penyimpanan, serta risiko kerugian untuk setiap *inventory* yang kedaluwarsa. Di sisi lain, kondisi *stock out* berdampak pada hilangnya pendapatan, menyebabkan lamanya waktu tunggu pelayanan, serta dapat membawa konsekuensi serius pada keselamatan pasien. Di RS Pusat Pertamina, dana yang dialokasikan untuk pembelian persediaan mengambil porsi 20% dari struktur biaya rumah sakit. *Inventory turn over ratio* di semester pertama tahun 2022 berkisar pada 1,13-1,60, kemudian bergerak menjadi 1,8-1,98 pada tengah tahun kedua. Angka kekosongan obat obat kurang dari 1% karena pencatatan yang belum memadai. Implementasi *lean management* diharapkan dapat menjadi solusi terhadap berbagai permasalahan tersebut.

Metode Penelitian ini adalah penelitian implementasi dengan desain *action research*, dengan mengintervensi seluruh data jumlah pemesanan obat, jumlah obat terjual, harga beli rata-rata, dan *lead time* periode Januari s.d Maret 2023 (pre intervensi) dan periode 2 Mei s.d 23 Juni 2023 (post intervensi). Data yang tidak lengkap dieksklusi. *Focused group discussion* dilakukan dengan staf Instalasi Farmasi yang terlibat dalam proses pengadaan obat.

Hasil Teridentifikasi kecenderungan peningkatan *inventory value* pasca intervensi yang tidak signifikan (p-value 0.251) yaitu sebesar rata-rata 16,11%, dengan angka perputaran persediaan 2,6 di akhir periode. Namun, insiden kekosongan obat mengalami penurunan secara signifikan sebesar 58% di akhir siklus *action research* (AR) pertama (p-value 0.002). Efektivitas proses (*value added ratio*; VAR) keseluruhan sebelum lean 5%, di akhir siklus AR pertama 4%, dan di akhir siklus AR kedua 8%. Pada sub proses evaluasi kebutuhan, di awal pengukuran diperoleh VAR 82%, lalu selama penerapan formula perencanaan obat yang baru menjadi 75%, dan 90% setelah dilakukan perbaikan terhadap formula.

Kesimpulan Implementasi *lean management* meningkatkan *inventory value* dengan perputaran persediaan yang masih dalam rentang yang dipersyaratkan, namun berhasil menurunkan insiden kekosongan obat secara signifikan. Efisiensi waktu proses teridentifikasi dari peningkatan nilai VAR.

Kata Kunci *Lean management*, persediaan, perencanaan kebutuhan obat, perputaran persediaan, kekosongan obat

ABSTRACT

THE IMPLEMENTATION OF A LEAN MANAGEMENT APPROACH
IN INVENTORY PROCUREMENT
AT PERTAMINA CENTRAL HOSPITAL

Background Large expenditures on inventory can lead to idle cash, and considerable costs for ordering and storage, as well as the risk of losing money for each expired inventory. Stock-out conditions, on the other hand, can lead to lost revenue, long waiting times for services, and serious consequences for patient safety. The inventory purchase fund at Pertamina Central Hospital was in responsible for 20% of the hospital's expenditures. The inventory turnover ratio increased to 1.8-1.98 in the second half of 2022 from 1.13-1.60 in the first half of the year. Due to insufficient records, there were less than one per cent of incidents involving stock outs. These issues are expected to be resolved by the adoption of a lean management strategy.

Method This implementation research was carried out using an action research design by intervening all data on the volume of drug orders, the volume of drug sales, the average cost per purchase, and the lead time for the periods beginning in January and ending in March 2023 (pre-intervention) and May 2 and ending on June 23, 2023 (post-intervention). The absence of data led to its exclusion. With pharmacy installation staff who have involvement in the drug procurement process, focused group discussions were conducted.

Result According to this study, there was a non-significant trend for the inventory value increased following the intervention (p-value 0.251), an average increase of 16.11%, and a 2.6 inventory turnover rate at the end of the study period. The incidence of medicine shortages decreased by 58% at the end of the first action research (AR) cycle (p = 0.002). Before lean, the overall process effectiveness (value added ratio; VAR) was 5%; at the conclusion of the first AR cycle, it was 4%; and at the conclusion of the second AR cycle, it was 8%. The VAR for the needs evaluation sub-process was 82% at the start of measurement. A 75% increase in VAR was observed after the new drug planning formula was implemented, followed by a 90% increase after improvements were made.

Conclusion Implementing lean management has resulted in a non-significant increase in inventory value while maintaining an acceptable level of inventory turnover. On the other side, drug shortages have been significantly decreased. The VAR value increased, revealing the processing time's effectiveness.

Keywords Lean management, inventory turn over ratio, planning for medicine requirements, inventory procurement, out of stock, and drug shortages