ABSTRAK

Perencanaan pengadaan obat di tingkat kabupaten memerlukan pendekatan berbasis data untuk memastikan ketersediaan obat yang optimal. Di Dinas Kesehatan Daerah Kabupaten Purworejo, perencanaan masih menggunakan metode konsumsi historis yang memiliki keterbatasan dalam mengakomodasi perubahan kebutuhan. Studi ini bertujuan mengevaluasi ketepatan pengadaan obat di Dinkesda Kabupaten Purworejo menggunakan analisis klaster distribusi obat. Penelitian observasional analitik dengan desain *cross-sectional* dilakukan menggunakan data distribusi obat dari Sistem Informasi Manajemen Obat (SIMO) periode Januari-Juni 2023. Dari 9.979 transaksi distribusi, sebanyak 4.525 transaksi obat esensial generik dianalisis menggunakan algoritma *K-Means* dan dibandingkan dengan 1.188 transaksi pengadaan mandiri puskesmas. Analisis menghasilkan tiga klaster distribusi dengan karakteristik berbeda. Klaster distribusi tinggi didominasi oleh obat-obat analgesik, kardiovaskular, vitamin-mineral dan obat saluran cerna. Ditemukan *overlap* jenis obat antara distribusi Dinkesda dengan pengadaan mandiri puskesmas, mengindikasikan area perbaikan dalam perencanaan. Pendekatan klaster dapat membantu mengidentifikasi distribusi obat untuk optimalisasi perencanaan. Diperlukan penguatan koordinasi dengan puskesmas dalam menentukan prioritas pengadaan untuk meningkatkan efektivitas manajemen logistik farmasi di tingkat kabupaten.

Kata kunci : Distribusi obat, *K-Means*, manajemen logistik, pengadaan obat, sistem informasi manajemen obat (SIMO)

ABSTRACT

Drug procurement planning at the district level requires a data-driven approach to ensure optimal drug availability. At the Purworejo District Health Office, planning still uses historical consumption methods with limitations in accommodating changing needs. This study explores the potential of cluster analysis to optimize the drug procurement planning process. An observational analytic study with a cross-sectional design was conducted using drug distribution data from the Drug Management Information System (SIMO) for the period January-June 2023. From 9,979 distribution transactions, 4,525 generic essential drug transactions were analyzed using the K-Means algorithm and compared with 1,188 independent procurement transactions by primary healthcare centers. The analysis generated three distribution clusters with different characteristics. The high distribution cluster was dominated by analgesics, cardiovascular drugs, vitamin-minerals and gastrointestinal drugs. Overlap was found between the District Health Office distribution and independent procurement by primary healthcare centers in the same therapeutic classes, indicating areas for improvement in planning. Strengthening coordination with primary healthcare centers is needed in determining procurement priorities to improve the effectiveness of pharmaceutical logistics management at the district level.

Keywords: *Drug distribution, K-Means, logistics management, drug procurement, drug information system*