

INTISARI

Latar belakang : Infeksi Multidrug-Resistant Organism (MDRO) menjadi tantangan serius dalam pelayanan kesehatan, terutama di *Intensive Care Unit* (ICU), karena berkaitan dengan peningkatan morbiditas, mortalitas, dan biaya perawatan. Peningkatan angka MDRO di Rumah Sakit Pusat Pertamina terbanyak dari ruang perawatan intensif periode Juli 2022 hingga Desember 2023 salah satunya terjadi peningkatan resistensi patogen ESBLs (*Extended-spectrum beta-lactamases*) yaitu *Escherichia Coli* ESBL dari 51% menjadi 59% di tahun 2023. **Tujuan** : Menganalisis dampak infeksi MDRO terhadap biaya dan lama perawatan pasien di ICU.

Metode : Penelitian ini dilakukan di *Intensive Care Unit* dan Laboratorium Mikrobiologi Rumah Sakit Pusat Pertamina dengan total sampel 189 pasien hasil kultur terinfeksi/ MDR dan kultur tidak terinfeksi/*non*-MDR. Pasien diamati mulai dari masuk ICU hingga keluar dari ICU dalam kondisi diperbolehkan pulang atau pindah ke ruang perawatan biasa. Menggunakan desain *cross sectional secondary data* dari rekam medis.

Hasil : Berdasarkan *cross sectional secondary data* membandingkan lama perawatan pasien pasien MDR dan *Non* MDR dalam penelitian ini rata-rata lama rawat pasien MDR lebih tinggi (14.19 hari) dibandingkan *Non*-MDR (11.38 hari). Berdasarkan *Mann-Whitney test*, terdapat perbedaan yang signifikan pada parameter lama rawat dan biaya perawatan pasien ICU antara kelompok MDR dan *Non*-MDR dengan nilai signifikansi $p < 0,05$. Biaya perawatan pasien lebih besar pada pasien MDR dengan rata-rata sebesar Rp. 199.945.971 dan *Non*-MDR yaitu Rp. 159.671.459 dalam satu periode perawatan.

Kesimpulan : Hasil analisis biaya dan lama perawatan pasien di ICU RSPP terhadap *Multidrug Resistant Organism* menimbulkan dampak terhadap biaya perawatan dan lama perawatan. Faktor lain yang mempengaruhi biaya dan lama perawatan pasien adalah sebagian besar pasien berusia lanjut, pasien dengan penggunaan alat invasif serta tindakan invasif yang dilakukan terutama memberikan support pernapasan selama pasien menjalani perawatan di ICU.

Kata Kunci: *Multidrug-Resistant Organism* (MDRO), biaya perawatan, lama perawatan, *Intensive Care Unit* (ICU), Sepsis.

ABSTRACT

Background: Multidrug-Resistant Organism (MDRO) infections pose a serious challenge in healthcare, particularly in the Intensive Care Unit (ICU), as they are associated with increased morbidity, mortality, and treatment costs. The highest increase in MDRO rates at Pusat Pertamina Hospital was in the intensive care unit from July 2022 to December 2023. One example is the increase in resistance of ESBLs (Extended-spectrum beta-lactamases) pathogens, namely *Escherichia coli* ESBL, from 51% to 59% in 2023

Objective: To analyze the impact of MDRO infections on the cost and length of stay of patients in the ICU.

Methods: This study was conducted in the Intensive Care Unit and Microbiology Laboratory of Pusat Pertamina Hospital, with a total sample of 189 patients with infected/MDR and uninfected/non-MDR cultures. Patients were observed from ICU admission to discharge, with discharge or transfer to a regular ward. A cross-sectional design was used, and data were obtained from medical records.

Results: Based on cross-sectional secondary data comparing the length of treatment for MDR and non-MDR patients, in this study the average length of treatment for MDR patients was higher (14.19 days) compared to non-MDR patients (11.38 days). Based on the Mann-Whitney test, there were significant differences in the length of stay and cost of ICU patient care between the MDR and Non-MDR groups with a significance value of $p < 0.05$. Patient care costs were higher for MDR patients, averaging Rp. 199,945,971, while for non-MDR patients, Rp. 159,671,459, per treatment period.

Conclusion: The analysis of the costs and length of stay for patients in the RSPP ICU for Multidrug Resistant Organisms (MDROs) impacts the cost and length of stay. Other factors influencing the cost and length of stay include the majority of elderly patients, patients with invasive devices, and invasive procedures, particularly respiratory support, during ICU treatment.

Keywords: Multidrug-Resistant Organisms (MDROs), cost of care, length of stay, Intensive Care Unit (ICU), Sepsis.