

INTISARI

Latar belakang dan tujuan penelitian: Pasien geriatri berisiko tinggi mengalami *medication error* yang disebabkan multimorbiditas serta perubahan fisiologi karena proses penuaan. Resep elektronik diharapkan dapat menurunkan kejadian *medication error*. Penelitian ini bertujuan untuk menganalisa hubungan penerapan resep elektronik terhadap *medication error* dan biaya terapi pada pasien hipertensi geriatri.

Metode penelitian: Penelitian ini merupakan penelitian kohort retrospektif, sampel penelitian yang digunakan adalah resep pasien hipertensi yang dikelompokkan menjadi kelompok resep manual dan kelompok resep elektronik masing-masing berjumlah 406 resep, serta memenuhi kriteria inklusi. Data diperoleh dari resep manual, resep elektronik serta rekap biaya obat selama pasien melakukan perawatan di rumah sakit. Data dianalisis menggunakan uji statistik *Chi-square* untuk menguji hubungan antara penggunaan resep elektronik dengan resep manual terhadap kejadian *medication error* serta uji statistik *Mann-Whitney* untuk melihat perbedaan biaya terapi menggunakan tingkat kepercayaan 95% ($p=0,05$).

Hasil penelitian: Terdapat 812 sampel resep yang memenuhi kriteria inklusi. Analisis hubungan memberikan hasil terdapat hubungan yang signifikan antara penggunaan resep elektronik terhadap *medication error* fase *prescribing* (keterbacaan resep, kelengkapan farmasetik dan klinik) dan fase *transcribing* (pasien tidak mendapatkan obat) dengan nilai $p < 0,05$. Pada *medication error* fase *prescribing* (duplikasi obat, interaksi obat, dan kontraindikasi) dan *medication error* fase *dispensing* (kesalahan kuantitas), memberikan hasil tidak ada hubungan yang signifikan ($p > 0,05$). Rata-rata biaya obat pada kelompok resep elektronik adalah Rp.84.689 ± 114.137, berbeda bermakna ($p < 0,05$) dibandingkan dengan kelompok resep manual Rp.95.486 ± 142.541.

Kesimpulan: Penggunaan resep elektronik mampu menurunkan *medication error* fase *prescribing* (keterbacaan resep, kelengkapan farmasetik dan klinik) dan fase *transcribing* (pasien tidak mendapatkan obat), namun untuk *medication error* fase *prescribing* (duplikasi obat, interaksi obat, kontraindikasi) dan fase *dispensing* (kesalahan kuantitas), memberikan hasil yang sama dengan resep manual. Biaya terapi menunjukkan perbedaan bermakna pada penerapan resep elektronik dibandingkan resep manual.

Kata Kunci: resep elektronik, *medication error*, hipertensi, geriatri, biaya terapi.

ABSTRACT

Background and aims : Geriatric patients are at high risk of experiencing medication errors caused by multimorbidity and physiological changes due to the aging process. Electronic prescriptions are expected to reduce the incidence of medication errors. This study aims to analyze the relationship between the application of electronic prescriptions on medication errors and therapy costs in geriatric hypertension patients.

Method: This study is a retrospective cohort study, the research sample used was prescriptions from hypertensive patients who were grouped into a manual prescription group and an electronic prescription group, each totaling 406 prescriptions and meeting the inclusion criteria. Data was obtained from manual prescriptions, electronic prescriptions and drug cost recaps while the patient was undergoing treatment at the hospital. Data were analyzed using the Chi-square statistical test to examine the relationship between the use of electronic prescriptions and manual prescriptions on the incidence of medication errors and the Mann-Whitney statistical test to see differences in therapy costs using a 95% confidence level ($p=0.05$).

Result : There were 812 prescription samples that met the inclusion criteria. Correlation analysis showed that there was a significant relationship between the use of electronic prescriptions and medication errors in the prescribing phase (prescription readability, pharmaceutical and clinical completeness) and the transcribing phase (patient not getting medication) with a p value <0.05 . In the prescribing phase medication errors (drug duplication, drug interactions, and contraindications) and dispensing phase medication errors (quantity errors), the results showed no significant relationship ($p> 0.05$). The average drug cost in the electronic prescription group was IDR $84,689 \pm 114,137$, significantly different ($p<0.05$) compared to the manual prescription group IDR. $95,486 \pm 142,541$.

Conclusion : The use of electronic prescriptions is able to reduce medication errors in the prescribing phase (prescription legibility, pharmaceutical and clinical completeness) and the transcribing phase (the patient does not get the drug), but for medication errors in the prescribing phase (duplication of drugs, drug interactions, contraindications) and the dispensing phase (quantity errors) , gives the same results as the manual recipe. The cost of therapy shows a significant difference when implementing electronic prescriptions compared to manual prescriptions.

Keywords : electronic prescription, medication error, hypertension, geriatrics, cost therapy