

# **Intervention by clinical pharmacists in the management of drug-related problems for hospitalized patients with neurological diseases**

## **Abstract**

**Background:** In the context of neurological care, drug-related problems (DRPS) are particularly significant due to the complexity of pharmacotherapy involved in treating neurological disorders. Clinical pharmacy services could minimize drug-related harm and improve patient care. **Objectives:** This study assessed the prevalence and types of DRPs in neurological and ICU patients and evaluated the effectiveness of clinical pharmacist interventions in resolving these issues. **Methods:** A retrospective study was conducted on 117 hospitalized patients with neurological disorders. Data were collected over three months, focusing on DRP identification, classification using the Pharmaceutical Care Network Europe (PCNE) v9.1 system, and pharmacist-led interventions. Statistical analysis included descriptive statistics and chi-square tests to evaluate associations. **Results:** Among the participants, 71.8% (n=84) experienced at least one DRP, with an average of 0.85 DRPs per patient. The most common DRPs were drug use without indication (32%), number of medications ( $\geq 4$  medications), and prolonged hospitalization ( $\geq 14$  days) were significant correlates of DRPs ( $p=0.003$ ). Despite pharmacists' interventions, the most identified DRPs were found in the domain of Treatment safety P2, which showed adverse drug event (possibly) occurring P2.1 were 20.87%, only 8.66% were fully accepted, primarily due to prescriber resistance. Technology adoption for DRP detection was inconsistent, with 63% of pharmacists using drug-checker apps like Drugs.com and Medscape. **Conclusion:** This study reveals a high rate of drug-related problems (71.8%) in neurological patients, particularly epilepsy cases. The acceptance rate of pharmacist interventions was notably low, underscoring systemic challenges such as limited interdisciplinary collaboration and prescriber resistance.

**Keywords:** Clinical pharmacist, drug-related problems, hospitalized patients, interventions, neurological disorders, PCNE classification.