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ORIGINAL ARTICLE **OPEN ACCESS**

Assessment Of WHO/INRUD Core Drug Use Indicators at Two Tertiary Care Hospitals In Andhra Pradesh

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ABSTRACT

Utilizing drugs is crucial to provide patients and the public with high-quality healthcare. Globally, there is an issue with the irrational use of medications. Inadequate antibiotic dosages, the Antibiotic treatment of viral illnesses, overuse of needles when oral pills would do just as well, prescribing drugs that are not by clinical guidelines, and self-medication are just a few factors contributing to irrational medication use. Two tertiary care institutions participated in a retrospective cross-sectional observational study to distinguish between reasonable and irrational drug use. Collection of 300 samples done in 6 months. Among all the prescriptions, we evaluated that male patients are more admitted than females. Our primary study assesses antibiotic use in patients to maintain rational drug use. We conclude that all prescriptions of both hospitals show that antibiotic usage is 20% (First Major Hospital) and 15% (Second Major Hospital). We also evaluated that people aged 59-69 years are admitted more to the hospital with severe illnesses.

Keywords*: Core Drug Indicators, Quality of Health, Medical care for patient, and Evaluation, WHO/INRUD.*

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INTRODUCTION

The misuse of pharmaceuticals is a global issue. Many factors contribute to the irrational use of medications, including excessive medication use (polypharmacy), insufficient antibiotic dosages, the treatment of viral infections with drugs, excessive injection use when medicine taken by mouth using antibiotics for viral infections would be more appropriate, prescribing of inappropriate medications based on clinical guidelines, and self-medication [1]. Illogical medication usage may raise morbidity and death rates, particularly in children with infections and chronic illnesses such diabetes, hypertension, epilepsy, and mental illnesses [2]. Indicators for drug usage have been created by WHO/INRUD (World Health Organization/International Network of Rational Usage of Medications) for performance assessments in three significant areas linked to the rational use of medications in primary care. Core drug use indicators [3] are what they are named.

Patients' irrational medication usage is causing them to lose faith in the healthcare system. In underdeveloped nations, the issue is made worse by few economic resources and an uncoordinated drug policy. Self-medication, polypharmacy, improper use of antibiotics, excessive use of injectables, and noncompliance with professional practice recommendations are the most frequent reasons for irrational drug use5. The poll reveals illogical medication usage behaviors, including polypharmacy, non-generic prescription, excessive antibiotic use, brief consultations, and inadequate drug labeling. Irrational drug usage was seen in both OPDs. The critical concerns that required the attention of the healthcare authorities were polypharmacy, brand prescription, over-prescribing of antibiotics, short consultation and dispensing times, patients' lack of information about prescribed medications, and the absence of all essential pharmaceuticals in stock. The current investigation found that both hospitals used standard prescription

sheets. None of the prescriptions had all the necessary patient-related information [6-8]. Except for average drugs/encounters and injections administered, prescribing indicators were below optimal. Patient care indicators fell below ideal levels, particularly for typical consultation dispensing times and medicine labeling. Most prescription, patient care, and facility-specific indicators do not reflect rational medication use, according to the WHO/INRUD core drug use indicators [9-10]. As a result, both health institutions need to encourage the sensible use of medication.

MATERIAL AND METHODS

This six-month, retrospective cross-sectional research of 300 prescriptions was conducted at two tertiary care institutions from October 2021 to March 2022. Institutional review board and participant informed consent were obtained before conducting the research. Subjects are screened based on the inclusion-exclusion criteria. After that, we designed a data collection form for sample collection. Later, collected data includes Screening Visits- Demographic details, chief complaints, diagnosis, Drug chart, and physical examination.

The study procedure:

- To examine the prevalence of rational drug use.
- Causes of irrational drug use.
- Drug utilization pattern in hospitals.

RESULTS

The study results were demonstrated in illustrated graphs.

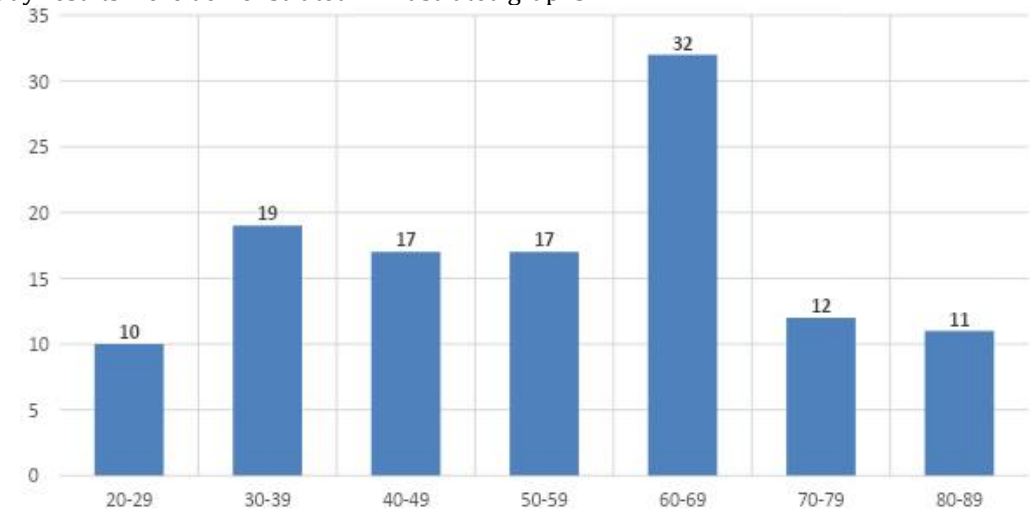

Figure 1: Age-wise Antibiotics Prescription

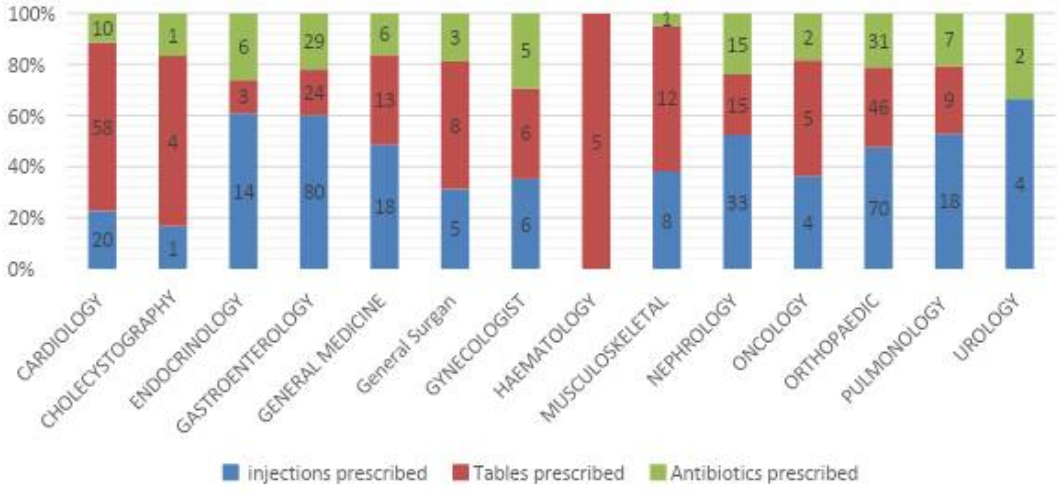

Figure 2: Disease Wise Drug Prescription

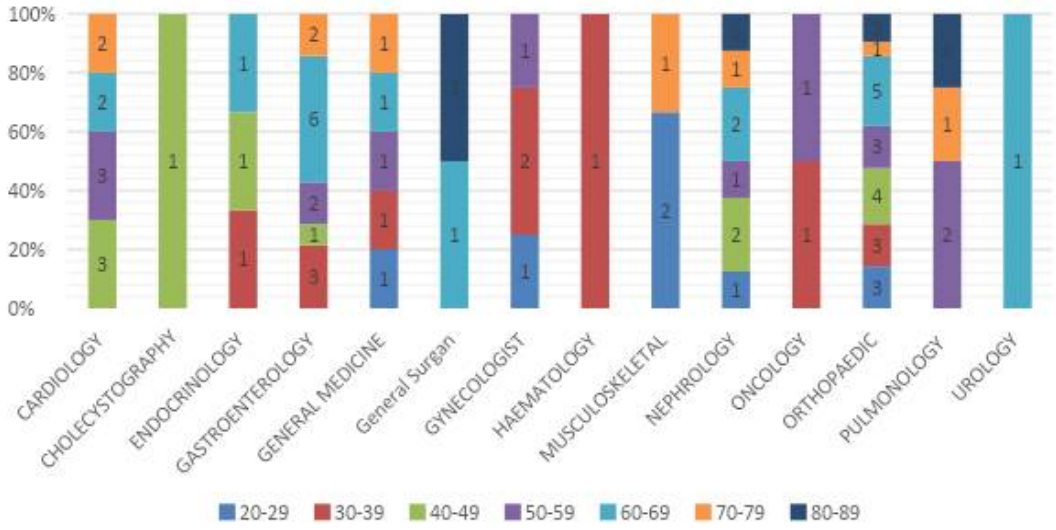

Figure 3: Diseased System

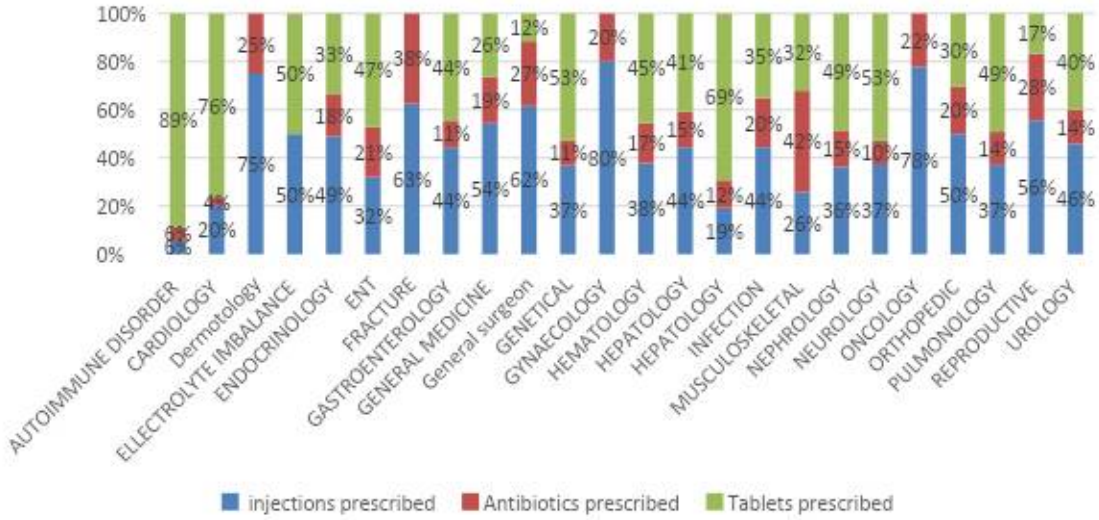

Figure 4: Percent of Drug Prescriptions in dosage form-wise

DISCUSSION

In the current research, we found that most patients got, on average, between 4 and 7 different medications. The size of Poly Pharmacy indeed leads to more medication interactions, worse drug responses, and higher treatment costs. Every instance had at least one injection, which added to the rising expense of care and patient morbidity. Additionally, there is a high prevalence of antibiotic usage, with widespread use of beneficial broad-spectrum medications like cephalosporins aminoglycosides, which may be overused in many cases. Among all the prescriptions, we evaluated that male patients are more admitted than females. Our primary study assesses antibiotic use in patients to maintain rational drug use. We found that all prescriptions of both hospitals show that antibiotic usage is 20% at First Major Hospital and 15% at Second Major Hospital. We also evaluated that people aged 59-69 years are admitted more to the hospital with severe illnesses. The antibiotic prescribing patterns in both genders are the same. These results from our research demonstrate that most patients in a hospital's surgical department were given an average of 4–9 medications per prescription, and all patients received unnecessary antibiotics.

Additionally, some medications came from the national essential drug list. Only 5–10% of all prescriptions were written in generic names, which may have been better even if most prescriptions complied with national STG. All of the research above concurs that the medical community has to become widely aware of appropriate prescription behaviors by taking the following five steps: The WHO program on rational use of medicines (RUD) places a strong focus on using generic medications, reducing polypharmacy, promoting the maximum number of prescriptions from the essential drug list, and limiting the use of antibiotics.

CONCLUSION

The study underscores critical healthcare concerns, notably the prevalence of polypharmacy and the consequent risks of adverse drug interactions, escalated costs, and patient morbidity. Alarming trends in antibiotic overuse, with a distinct bias towards male patients and the age group of 59-69, were observed. A meager adherence to prescriptions in generic names highlights an imperative for alignment with WHO's Rational Use of Medicines guidelines. These findings collectively call for immediate reform in prescription behaviors to ensure rational drug use and optimize healthcare delivery.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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