

LETTER TO THE EDITOR

To

The Managing Editor
Pakistan Pediatric Journal
Lahore

Pak Pediatr J 2025; 49(3&4): 326-27

Minimize Medication and Prescription Errors in Pediatric Practice: Ensure Well-being of the Children.

Drug administration is a common therapeutic modality for treating patients.¹ But drugs used irrationally cause devastating effects. These increase medication errors, adverse events, drug-drug interaction, prolonged hospital stays, increased care costs, morbidity, and mortality.^{1,2}

“Medication errors” (MEs) are defined as any avoidable event in prescribing, transcribing, dispensing, administering, or monitoring.³⁻⁵ MEs may happen at diagnosis and/or any stage in therapeutic course.^{3,6}

More than 500,000 deaths are estimated to occur due to medication errors yearly in Pakistan; deaths might be more as most medication errors are not reported due to fear.⁷ MEs occur more in children than in adults and elderly. One of the main ME is prescription-error.⁸ Around 70% of MEs are prescription-errors.⁹

The prescription errors are due to poor selection, wrong choice, inadequate dosage, inappropriate administration route, inapt frequency/duration of drugs, illegible handwriting, incorrect spelling, inadequate knowledge, gap in communication, improper transcribing, and overlooking clinical condition.^{8,9}

Children are vulnerable to MEs. MEs harm three times more to children because of small body mass requiring dosage calculation on basis of weight, height, age, and clinical condition and specified formulations are needed for treating children. Continuous monitoring is needed for drugs with narrow therapeutic range. This complex process increases the likelihood of medication and prescription errors.^{2,5}

Wide variation in occurrence of prescription errors (3-20%) or drug-related issues (around 50%) in children¹⁰⁻¹² The legitimate check and balance on prescription process in Pakistan is not upto mark; one of the major reasons leading to poor prescribing practices.⁹ The knowledge and understanding of medication and prescription errors is critical for quality care of children.¹³ Clinicians, nurses, and pharmacist must be trained in prescription writing process. Students should be educated on how to write a proper prescription for patient. This likely ensures provision of quality safe care to children and their well-being.

Prof. Rano Mal Piryani

Professor of Pulmonology and Medical Education and Director Medical Education, Bilawal Medical College, Liaquat University of Medical and Health Sciences, Jamshoro, Sindh, Pakistan.

Email: rano.piryani@gmail.com,
r_piryani@hotmail.com

Cell No: 0092-3366677006

REFERENCES

1. Mustafa ZU, Haroon S, Aslam N, Saeed A, Salman M, Hayat K, Shehzadi N, Hussain K and Khan AH (2022) Exploring Pakistani Physicians' Knowledge and Practices Regarding High Alert Medications: Findings and Implications. *Front. Pharmacol.* 13:744038. <https://doi.org/10.3389/fphar.2022.744038>
2. Abiri et al. An Assessment of Medication Errors Among Pediatric Patients in Three Hospitals in Freetown Sierra Leone: Findings and Implications for a Low-Income Country. *Pediatric Health, Medicine and Therapeutics* 2024;15: 145-158. <https://doi.org/10.2147/PHMT.S451453>
3. Hashim F, Anjum L, Siddiqui AA, Qadir S. Assessment of Medication Errors in Pediatric

Patients: Systematic Studies on Associated Variables. RADS J. Pharm. Allied Health Sci. 2023; 1 (3):101-107. Available from: <https://www.google.com/url?sa=t&source=web&ct=j&opi=89978449&url=https://jphs.juw.edu.pk/index.php/jphs/article/download/32/41/149>

4. D'Errico S, Zanon M, Radaelli D, Padovano M, Santurro A, Scopetti M, Frati P and Fineschi V (2022) Medication Errors in Pediatrics: Proposals to Improve the Quality and Safety of Care Through Clinical Risk Management. *Front. Med.* 8:814100. <https://doi.org/10.3389/fmed.2021.814100>

5. Marufu TC RN, Bower R RN, Hendron E, Manning JC RN. Nursing interventions to reduce medication errors in paediatrics and neonates: Systematic review and meta-analysis. *J Pediatr Nurs.* 2022 Jan-Feb;62: e139-e147. <https://doi.org/10.1016/j.pedn.2021.08.024>

6. Obaid H, Sohaib AU, Munir AB, Akbar J, Qamar-uz-zaman M, Amjad MA, Ahmad S. Prescription Errors Still a Challenge in Pakistan - A Cross-Sectional Study from Central Punjab, Pakistan. RADS J Pharm Pharm Sci. 2019; 7(4): 181-185. Available from: <https://www.researchgate.net/publication/339746689>

7. Naeem, A., Batool, S., Afzal, F., (2024). Knowledge and attitudes of emergency nurses regarding medication errors. *Biol. Clin. Sci. Res. J.*, 2024: 5 (1): 927. <https://doi.org/10.54112/bcsrj.v2024i1.927>

8. Babar, P., Qaiser, U., & Rahman, I. ur. (2023). Assessment of prescription writing skills among dental house officers: A multi-center study. *Pakistan Journal of Medical Sciences*, 40 (1) 170-173. <https://doi.org/10.12669/pjms.40.1.7688>

9. Obaid H, Sohaib AU, Munir AB, Akbar J, Qamar-uz-zaman M, Amjad MA, Ahmad S. Prescription Errors Still a Challenge in Pakistan - A Cross-Sectional Study from Central Punjab, Pakistan. RADS J Pharm Pharm Sci. 2019; 7(4): 181-185. Available from: <https://www.researchgate.net/publication/322701304>

10. Ibrahim N, Wong IC, Tomlin S, Sinha MD, Rees L, Jani Y. Epidemiology of medication-related problems in children with kidney disease. *Pediatr Nephrol.* 2015;30(4):623-633 <https://doi.org/10.1007/s00467-014-2982-5>

11. Ahmed T, Iqbal Q, Minhas M, Rauf A, Mehmood S. Prescription Writing Errors Detection by Pharmacist in a Pediatric Ward of Provincial Hospital Quetta, Pakistan. *Asian Journal of Biology, Health and Pharmacy (AJBHP)* 2017; 1 (6): 13-19. Available from: <https://www.researchgate.net/publication/322701304>

12. Gates PJ, Meyerson SA, Baysari MT, Westbrook JI. The prevalence of dose errors among paediatric patients in hospital wards with and without health information technology: a systematic review and meta- analysis. *Drug Saf* 2019; 42(1):13-25. <https://doi.org/10.1007/s40264-018-0715-6>

13. Raza H, Akhtar Y. Prevention of Medication Errors in a Pakistani Hospital Because of Concurrent Evaluations and Interventions by Pharmacists. *National Journal of Health Sciences*, 2021; 6 (4): 149-153. Available from: <https://ojs.njhsciences.com/index.php/njhs/article/view/229>