LETTER TO THE EDITOR

From paper to pixels: EMR as the solution to prescription errors in Pakistan

Areeba Memon[1], Minahil Memon[2], Dua Mahfooz Memon[3]

A prescription is a written directive that outlines instructions for medication administration, including dosage, formulation, route, frequency, and duration. It is dispensed to patients following a physician's consultation and forms the cornerstone of their treatment plan. Any deviation from this plan due to errors constitutes a prescription error, a preventable adverse event related to inappropriate deliverance of information in one or more aspects.[1] While developing nations have swiftly transitioned to computer-based prescription systems, through Electronic Medical Records (EMRs), resource-constrained countries like Pakistan still lag behind. In one Asian study, it was found that the distribution of errors differed significantly between handwritten and electronic prescriptions, with rates of 35.7% and 2.5%, respectively.[2]

Although the use of EMR systems has gained momentum in Pakistan, particularly in private-sector hospitals, their adoption still needs to be improved in public-sector practices. Handwritten prescriptions increase the risk of errors, particularly in busy tertiary care hospitals where healthcare staff are overwhelmed by patient volumes. Illegible handwriting, communication lapses, and confusion stemming from similar drug packaging and names compound these risks. This limitation not only compromises the readability of prescriptions but also hampers medication reconciliation processes, potentially leading to serious drug interactions and compromised patient histories.

EMR systems offer numerous benefits, including a standard template with a forcing function incorporated for fields such as drug dosing, administration route, duration, and allergy information, as well as access to Prescription Drug Monitoring Programs (PDMPs) to identify potential drug-seeking behaviour. Considering Pakistan's low health literacy rate and challenges related to medication adherence and follow-up, EMRs play a crucial role in tracking past medication history and promoting patient adherence. Additionally, they reduce paper waste and the physical space required for storing patient information.

In light of these significant advantages, Pakistan's healthcare must expedite the integration of EMR systems across all medical practices. By doing so, we can enhance patient safety and healthcare quality and contribute to environmental sustainability. This transition minimises paper wastage reduces the ecological footprint associated with printing and storing paper documents, and streamlines administrative processes. Furthermore, EMRs facilitate data analyses and population health management, enabling healthcare providers to make informed decisions and improve healthcare outcomes. Therefore, embracing EMR technology is a step towards modernising healthcare delivery and a responsible action towards preserving our environment for future generations.

DOI: https://doi.org/10.47391/JPMA.20677

Disclaimer: None.

Conflict of Interest: None.

Source of Funding: None.

References

1. Aronson JK. Medication errors: definitions and classification. Br J Clin Pharmacol 2009;67:599-604. doi: 10.1111/j.1365-2125.2009.03415.x.
2. Albarrak AI, Al Rashidi EA, Fatani RK, Al Ageel SI, Mohammed R. Assessment of legibility and completeness of handwritten and electronic prescriptions. Saudi Pharm J 2014;22:522-7. doi: 10.1016/j.jsps.2014.02.013.

[1]Dow Medical College, Dow University of Health Sciences, Karachi, Pakistan; [2]Department of Orthodontics, Ziauddin Hospital, Karachi, Pakistan; [3]Department of Paediatrics, Aga Khan University Hospital, Karachi, Pakistan.
Correspondence: Areeba Memon.
Email: areeba_memon30@hotmail.com
ORCID ID. 0000-0002-5017-3546

Submission complete: 04-06-2024 **1st Revision received:** 06-09-2024
Acceptance: 07-09-2024 **Last Revision received:** 06-09-2024

AUTHORS' CONTRIBUTIONS:
AM: Concept, design, data acquisition, interpretation, analysis, formatting a draft, revision, final approval and agreement to be accountable for all aspects of the work.
MM: Concept, design, data interpretation, analysis, drafting, final approval and agreement to be accountable for all aspects of the work.
DMM: Data interpretation, analysis, drafting, final approval and agreement to be accountable for all aspects of the work.