Electronic prescribing reduces prescribing error in public hospitals

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Aims and objectives. To examine the incidence of prescribing errors in a main public hospital in Pakistan and to assess the impact of introducing electronic prescribing system on the reduction of their incidence.

Background. Medication errors are persistent in today’s healthcare system. The impact of electronic prescribing on reducing errors has not been tested in developing world.

Design. Prospective review of medication and discharge medication charts before and after the introduction of an electronic inpatient record and prescribing system.

Methods. Inpatient records \(n = 3300\) and 1100 discharge medication sheets were reviewed for prescribing errors before and after the installation of electronic prescribing system in 11 wards.

Results. Medications (13,328 and 14,064) were prescribed for inpatients, among which 3008 and 1147 prescribing errors were identified, giving an overall error rate of \(22.6\%\) and \(8.2\%\) throughout paper-based and electronic prescribing, respectively. Medications (2480 and 2790) were prescribed for discharge patients, among which 418 and 123 errors were detected, giving an overall error rate of \(16.9\%\) and \(4.4\%\) during paper-based and electronic prescribing, respectively.

Conclusion. Electronic prescribing has a significant effect on the reduction of prescribing errors.

Relevance to clinical practice. Prescribing errors are commonplace in Pakistan public hospitals. The study evaluated the impact of introducing electronic inpatient records and electronic prescribing in the reduction of prescribing errors in a public hospital in Pakistan.

Key words: hospitals, medication errors, nurses, nursing, Pakistan, prescribing errors

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Introduction

Patient safety has become a nationwide priority. Consequently, healthcare delivery has come under tighter scrutiny during the last decade (Stone \textit{et al.} 2009). Annually, medication errors exact an astounding high financial and human toll on society through direct injury to patients and substantial increase in medical expenditure (Dean Franklin \textit{et al.} 2005). The medication process which can be described in different stages of prescribing, transcribing, dispensing, administration and monitoring, has proven to be error-prone (Ghaleb \textit{et al.} 2010). Clinical decision and prescription

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