

Medication and Human Errors in Emergency Medicine

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One of the most important and main concept of health care systems, as a global problem, is patient safety. Much standardization has been introduced to decrease the errors. Medication errors are common in emergency departments across the world.

A medication and human error in emergency departments ends with promoting the culture of reporting medication errors and adopting a systematic approach to eliminate such errors. In some health systems, such errors are not recorded properly, so the statistics are not accurate, and this is the reason for continuation of errors. An ideal environment for occurrence of medication error depends on different factors. For example, many different pharmaceutical products, natural products, herbal formulation, and synthetic forms are now available, which can all be subject of a medical error.

Overcrowded emergency departments, frequent work shifts, heavy workload, absence of competent medical personnel in the shifts, and failure of programmed medical staffs are the other factors that may cause errors. Due to the nature of the services provided in the emergency departments and the large number of patients, heavy workload may cause human errors. Knowledge of medication use is highly important to decrease these errors, in emergency departments, and it is perhaps the corner stone of errors reduction. Overcoming these challenges requires adequate knowledge of the medical staff and choosing appropriate strategies in all aspects. Medication error analysis provides order entry systems, barcoding system, medication reconciliation, and standardizing medication use process, thus, special consideration should be given to the develop strategies for the extreme age groups: the old and the pediatric population groups, as they are always at risk.

An important efficient way to promote patients' safety level is to identify medical errors and their causes. As the main part of emergency medicine identification of medical errors, treatment and care processes are of high importance (1, 2).

In Emergency departments, reducing errors and im-

proving patient safety remains a major concern. A large part of emergency department medical errors are preventable, which are often a characteristic of overcrowdedness in these departments (3).

Despite an increased attention to patient safety and quality of health care services, errors are still frequent in emergency departments.

The risk of errors can be reduced by increasing the number of nurses, physicians, skilled technicians, and other staffs to adjust the workload and retrain courses to improve the quality of emergency department services.

In highly crowded emergency departments, the risk of medical and human errors is high. However, better medical stock design and labeling can lower medical errors; and the primary step in error reduction is error identification (4, 5).

Medication or any relevant errors can increase the length of hospitalization, mortality, and costs, especially in the large teaching hospitals. Considering the number of medical staff ratio, according to annual and monthly patients visits to emergency departments, even bearing in mind the high workload in the day and night work shifts, could reduce medical errors. A significant number of some ED visits is related to medical administration or prescription, where an error can occur.

Reasonable shift workload and the etiologic identification of other errors can diminish the adverse impact of human errors in emergency department. However, there is lack of systematic studies in the field of causes of human medical errors in emergency departments in Iran. Thus, more organized investigations are needed to provide a guideline for emergency department human error control and patient safety.

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