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Editorial

Medical Errors in the Emergency Department

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Emergency department across South Asia faces medical errors like the rest of the world. Due to the nature of work in the emergency department, the chance of medical errors is more as compared to other areas of health care. The medical error has been defined by the institute of medicine as "The preventable adverse effect of Medical Care whether or not it is evident or harmful to the patient".[1]

The spectrum of medical error is quite larger due to a very broad category of care provided in emergency departments. This wide spectrum of disease presentation, when coupled with acuity and timeliness of the condition and treatment requirement and the interplay of so many care providers in limited space, makes a good recipe for medical errors. Most of these medical errors are related to adverse drug events and improper transfusions, misdiagnosis, under and overtreatment, and mistaken patient identities. Medical errors are also associated with extremes of age, new procedures, urgency, and the severity of the medical condition being treated. [1]

The category of preventable medical errors can be broadly grouped into the following:

- Acquiring infections
- Medication errors
- Communication issues
- Quality of care issues

ACQUIRING INFECTIONS

The emergency department deals with a significant number of patients either prone to infection or dealing with the infection. If the care providers are not careful in their infection control practices, then they can introduce infections to unsuspecting patients while providing care. A mindset of good infection control is a must to avoid spreading unnecessary infections. Liang et al described the challenges regarding infection control in the emergency department and inferred that the emergency department personnel play an invaluable role in infection prevention, whether through hand hygiene practices or through preventing hospital-associated infections.[2] They have felt that the unique requirements of the infection control practices in the ED should be discussed in the hospital infection control bodies and implemented with the help of electronic ways like EMR, electronic notifications and alerts, bundled interventions addressing the issues like CLABSI, CAUTI and VAP and then monitoring isolating patients appropriately and also hand hygiene practices of the care providers.[3]

MEDICATION ERRORS

Medication error coupled with communication error are the two most important areas that can cause the most errors.[1,4] Medication delivery is a complex action in itself and has the potential to cause the error. Despite instituting a better system, however, the chances of medication errors cannot be brought down to zero. Plenty of factors play role in error predisposition which includes improper drug selection by the physicians to improper administration technique by the staff during administration of drug to improper education to the patients taking medications at home. The outcomes of these errors may range from mild inconvenience to the patient to even fatal toxic reactions. To decrease the medication errors the Department of Hospital and Clinical Pharmacy at the Maniple Teaching Hospital, Pokhara, Nepal, has taken the initiative in identifying the error-prone situations and has taken remedial measures including educational and managerial interventions.[5] With the same token a study done on nurses viewed the decreased workforce as one of the most reported causes of the error. Another issue that was reported quite frequently was increased workload and stress on the nurses, and then the illegible handwriting and inadequate knowledge of the medications leading to miscalculations also.[6] A study from Iran and another from India have looked at various strategies like wristband barcode scanning, computerized physicians order entry and root cause analysis of each error or the near-miss to avoid the errors from happening again. Other prevention of error techniques can address issues like provision of pharma guide, defining protocols, labeling of the medications and doing patient education with proper drug information.[7,8]

In this regard, special consideration needs to be given to the pediatric population for being at higher risk of harm. In the struggle for the prevention of medication error, it begins and ends with the development of the culture that promotes the reporting of medication errors and a systematic, no punitive approach to their elimination.[9]

COMMUNICATION ISSUES

Emergency departments are one of the highest risk areas in health care. While delivering the care a lot of communication is done as a routine in between physicians, physicians, and nurses and with patients and care providing

staff. Emergency physicians work against time and at times they have to assemble and manage multidisciplinary teams with little notice and deal with critically ill patients. All these communication instances are potential for errors. With greater emphasis on management and leadership skills, there is an increasing awareness of the importance of human factors in improving patient safety. Non-clinical skills are required to achieve this in an information-poor environment and to minimize the risk of errors. Training in these non-clinical skills is a mandatory component in other high-risk industries, such as aviation and, needs to be part of an emergency physician's skill set.[10]

QUALITY OF CARE ISSUES

Quality is attained through collective delivery and the process of provision of care to the individual in a way that results in the improvement of the health situation of the patient. Institute of Medicine has defined the quality of care as "quality of care is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge". [11] Due diligence can be seen as the best approach to minimize risk of errors, as in all aspects of clinical care and non-clinical care delivery the complexity of emergency department processes requires people to keep the patients and the department safe through quality of care.

The problem resulting from all medical errors is seen in terms of disability, increasing cost of care and increasing dissatisfaction and violence against health care workers. The resultant disability or mortality puts families into economic and emotional turmoil that can have far-reaching consequences.

The most important aspect of changing this grin picture is to identify the magnitude of the problem, look at the points of improvement and then have a collective collaborative approach. The first and most important part is the proper reporting of medical errors which is the trickiest part. In our societies and across our emergency department, people may not even realize that a mistake is done and then reporting it becomes impossible. So rather than trying to find specific problem, we need to utilize available data and put the system in place and then start reporting if there are mistakes.[8, 10, 12] Equally important is safety and quality mindset, due to rapid turnover of emergency staff we need to enhance the system and through system of safety improve the individual's shortcomings.

Once we develop the safety and quality mindset, we would know that the solution to avoid error requires constant struggle. In the quality of the above issue of care and communication are the most to be addressed at the outset. Adequate training of the physician and nursing staff working in the emergency department is our best insurance against the errors. Training in emergency medicine needs to be strengthened for the doctors and nurses along with provision of adequate resources. A trained nurse or a doctor should also improve the communication gaps both at the beginning of the treatment until the time of discharge. A medication error can only be minimized through system enhancement with all checks and balances starting from prescribing to disposing to administration.

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