

Adverse Events in Affiliated Hospitals of Mazandaran University of Medical Sciences

Benyamin Mohseni Saravi¹, Hasan Siamian², Ayyob Barzegar Nezhad³, Zoleleykha Asghari⁴, Azar Kabirzadeh²

Health information Management Office, Mazandaran University of Medical Sciences, Mazandaran, Sari, Iran¹

Health information Management Department, School of Allied Medical Sciences, Mazandaran University of Medical Sciences, Mazandaran, Sari, Iran²

Mazandaran University of Medical Sciences, Mazandaran, Sari, Iran³

School of Medicine, Mazandaran University of Medical Sciences, Mazandaran, Sari, Iran⁴

Corresponding Author: Azar Kabirzadeh, Health information Management Department, School of Allied Medical Sciences, Mazandaran University of Medical Sciences, Mazandaran, Sari, Iran. Email: siamian46@gmail.com

ABSTRACT

Due to the complexity of the hospital environment, its structure faces with multiple hazards. The risks whether by providing the care and whether by hospital environment endanger patients, relatives and care providers. Therefore, a more accurate reporting and analysis of the report by focusing on access to preventative methods is essential. In this study, hospitals' adverse event that has sent by affiliated hospitals of Mazandaran University of Medical Sciences to deputy for treatment has studied.

Key words: Adverse events, events reports, patient safety, report analysis, Hospital.

1. INTRODUCTION

Hospitals accompany with providing care to conditions must think to ensure patient safety in the hospital environment. Hospital environment in terms of cumulative structure of risk factors and also offering treatment services is not empty of threat. Patient safety, relatives and care providers involved in line with hospital administration and whether the point of providing all the patient's safety management issues. Hospitals have responsibility about above mentioned in the subject of patient safety management in the hospital (1). Auditing of patient safety aims at early detection of risks of adverse events and is intended to encourage the continuous improvement of patient safety. Hospital adverse events or unexpected accidents, the attention of caregivers and hospital administrators (2) The aim of the adoption process of the "Quality of hospital care for mothers and newborns babies, assessment tool" (WHO, 2009) was to provide the Albanian health professionals of maternity hospitals with a tool that may help them assess the quality of perinatal care and identify key areas of pregnancy, childbirth and newborn care that need to be improved (3) In order to promote patient safety, there is an increasing push toward transparency with regard to patient outcome data in the United States medical system. The impetus for this movement was sparked largely in the 1990s when two prominent reports summarizing the number and type of errors committed by hospitals were published (4, 5). hospital adverse events or Sentinel event which are the attention of caregivers and hospital administrators, sentinel event is an unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. Serious injury specifi-

cally includes loss of limb or function. The phrase "or the risk thereof" includes any process variation for which a recurrence would carry a significant chance of a serious adverse outcome. Such events are called "sentinel" because they signal the need for immediate investigation and response. The terms "sentinel event" and "error" are not synonymous; not all sentinel events occur because of an error, and not all errors result in sentinel events(6), but for investigating and reporting all of above cases should be form incidents reports (7).

2. FINDINGS

In this report predisposing states, start of the event and arisen complications will be recorded. At the time of analysis reporting, the purpose of this study, consideration is to achieve prevention tool. The Ministry of Health of the Islamic Republic of Iran has raised Errors reporting system as part of a system entitled clinical governance. In order to implement these form events that are subject to medical error reporting form, these forms presented to affiliated hospitals. Accountable of quality improvement is required to complete and submit reports to the Vice chancellor for treatment of the university. The forms shall be subject to review and analyze are the reported cases of adverse events and fundamentally are not considered medical errors, but can be considered in order to maintain patient safety, analysis to achieve prevention strategies and providing of educational materials for all hospital which leading to the prevention of avoidable cases is to be separated.

Because, in Iran hospital care system, there are issues such as of adverse events, But, lessons that we can take through these

reports at this time, amongst the lack of reporting and disciplinary procedures accompanying invisible things are to maintain the reputation of hospitals has remained silent. Since the implementation of clinical governance are in reducing hospital adverse events. Therefore, in this study, we want to introduce by using of the reported cases of affiliated hospitals of Mazandaran university of Medical Sciences. Perhaps, the results of this report can be a tool for recovering hospital administration system to prevent similar events from occurring or to minimize its occurrence.

First case: In a psychiatric center, a snake came into the ward; staff and patients were led to fear. It should be noted that due to exposure of hospital near to the forest area, it is better to have special control for similar ones. In this case, the animal does not harm anyone, but it is certainly the case able to create more complex. Habibzade et.al (2007) reported that 24 people were injured by wolf. It was happened in an open area, but it was more serious in indoor and closed area (8). Research on adverse events in psychiatric inpatient care is limited to a few single-hospital or single-health system studies of medication errors (9-11).

Second case: In a general hospital, fire extinguisher was installed shortly inside the room with the patient bed, of fittings installed was dropped, while hitting the bed and make noise to cause disruption in the sector. 50% of affiliated hospitals of Kurdistan Medical Sciences have expert study. It is obvious that this case should be investigated by considering the rules and guidelines for safety committees been tolerated so as to prevent similar situations (1).

Third case: in a general hospital, at the time of breast feeding, the chair was broken and it caused Mother and baby will lead to fall down, but fortunately did not harm anyone. This is what the furniture was purchased for the hospital is absolutely certain rules, but periodical control of furniture and withdrawing of damaged or depreciated items are responsibilities and tasks of all departments of hospitals.

Fourth case: in the operating room of a general hospital, the operating room floor cleaning without being slippery to staff and clients, one of the employee has fallen and damaged shoulder. Fortunately he was not seriously injured. There are numerous articles about the crash of the patients or their relatives, but because they are often on special populations such as the elderly or children, therefore, it is not possible to compare the results. But, a study estimated the probability that the point has been addressed. Salarvand et.al concluded that ground falling is an important threat for hospitalized old patients and is an important problem for care health services. Nurses can recognize patients at risk of falling. Fulfillment of preventive programs can decrease rate of ground falling in hospitalized old patients (12). Obviously, in cases surfaces must be washed or verbal warning of polished boards or alarm to control and minimize the use of these types of injuries.

Fifth case: in a general hospital, patient's Partners had referred for providing copies of medical records in a Medical records department, by using of crowded conditions in medical filing, they theft all of the proposed patient's medical records. In some sources has mentioned about loss or theft of medical file, according to the medical file is considered as a document, therefore, both the medical records director and robber according to Article 544 of the Civil Code of Iran, regarding the theft of government documents, which is punishable six months to two years in prison, will be condemn (13).

Sixth case: in a general hospital, the operating bed during surgery failed of the joints, in such a way that the position of the patient disarrayed on the surgery and it caused several problems. Medical equipment in a study from the perspective of hospital staff showed that they believed they are in a good condition view point of control and evaluation of medical equipment(13). The results of Noori Tajer's study showed that almost 60% of medical equipment of these hospitals had not at all been controlled or evaluated by the personnel of medical units and at none of the investigated hospitals there existed an engineering maintenance medical unit. In this research work the up-keep and maintenance of medical equipment relates to supply, repair and technical training of the sets and ,on the whole, medical equipment of the studied hospitals had fairly a proper standard as follows: Repair service and maintenance: 29.6%, Supply of equipment: 26.1%, Educational and training aspects: 14.1 % (14). It is obvious that the periodic service will lead to the resolution of a series of future issues. But especially the staff in the operating room washing process should also evaluate the performance of the equipment during operation to avoid a crisis.

Seventh case: in a general hospital, Shielded lighting that was installed just above the patient's head and for some unknown reason was dugout and landed the patient's head and this caused panic the patient. In Fathi's research, only 10 percent have a good position in terms of electrical installations(1).

Eighth case: In a psychiatry center, all medical records and files of one patient were placed in another patient's file. Therefore, Patient records in place were missing; medical records administrator and the staff seemed to spend much of their time searching for misplaced documents. Misplacement of patient records, including all records, or even a sheet from main file to another file, Can be caused by negligence, nursing staff, ward clerks, administrative staff and even medical records staff. Obviously, for solving the issue should be reviewed with related personnel about instructions and guidelines on how to keep records. Sweeney defined a new approach to locating and replacing personally-identifying information in medical records that extends beyond straight search-and-replace procedures(15).

Ninth case: In an education hospital, the patient is lying on the mattress, being part of child on the part of the mattress regardless may cause problems for the patient, Children gather fiber mattress of his and had fallen something from mattress into his nose. There are dipping multiple frequencies of random objects by children with. However, ignoring their parents or health care providers may also be associated with serious injuries. Above mentioned matter considered as the lack of attention and will be discussed in the safety and nursing committee.

10th case: in a general hospital, two patients are transferred simultaneously to another hospital and one of them was on monitoring. Patient who were closer to the hospital and he is going to be moved. Then, the another patient who is on monitoring which Also, due to simultaneity and distance to another hospital, monitor charge finished, but fortunately did not cause problem for the patient. Due to evaluation of working devices, before starting to work in educational nursing devices, there are hints on controlling all the resources. It is true for ambulance during to the mobility of the patient's, the nurse undertakes the responsibility of patient's transmitting and it has no exception. Before movement of patient, the items that are supposed to work

must check. All resuscitation equipment should be examined closely before use, as malicious tampering or manufacturing faults may occur (16).

Eleventh case: in a birth center, With regard to infectious and non-infectious material buckets were separate, mistakenly a pair of infected gloves was put into the non-infectious bucket. In Mohseni, Javadian et al. Study which has been done in affiliated hospitals of Mazandaran University of Medical Sciences showed that although for years the emphasis is on waste separation, still, 85% of university hospitals is not fully waste Isolation (17). However, given that the article is a bit old, now, it seems to have improved. But not separating is a problem and due to lack of proper waste replacement very important a problem.

Twelve case: in a general hospital, in dialysis ward, hemodialysis machine was connected to patient was corrupted, Caregiver attempted to activate another hemodialysis machine to the patient, but at the time of patient movement, caregiver did not notice the lack of preparedness then dialysis of patient stopped. Then, patient re-connected to the previous hemodialysis machine and after the readiness of new device moved to the next machine. Frequently movements results in anxiety and nervousness of patient and patient's companions. High-quality, consistent emergency care demands continuous quality improvement and is directly dependent on effectively monitoring, integrating, and evaluating all components of the patient's care (18, 19).

3. DISCUSSION

In article of Carlos Eduardo David de Almeida: the procedure was performed without interurrences until the onset of circulatory support. After respiratory arrest, the anesthesiologist observed a darker shade of red in the blood on the exit of the membrane oxygenator. Arterial blood gases showed severe acidosis and hypoxemia with the following values: pH 7.07, PaCO₂ 67.3 mmHg, PaO₂ 108 mmHg, BE -9.6 mmol.L-1, HCO₃ 15.8 mmol.L-1, SatO₂ 33%. The entire system was immediately checked, but no apparent irregularities were observed(20). But, Of the incidences, 19% could have led to serious complications for the patient; however, no morbidity or mortality actually occurred in this series (21). It is evident that the control of periodic calibration and authorized services, in many cases, prior to the occurrence, will be discovered. However, some articles have been noted using of tools and new technologies to control and minimize in some cases of error adverse events. But it is evident that the use of the above mentioned cases is not limited the Fixing responsibility of reports analysis and achieving access to solving the case.

4. CONCLUSION

Research results indicate that a variety of types of events which all cases were preventable. Progressing of the reporting process and reviewing of the reports, can achieve to improve condition and access to educational resources for staff.

Acknowledgement. *This article is part of a research project registered with No. H=91-3 HSR committee of Mazandaran University of Medical Sciences and was conducted with the support of the university.*

Conflict of interest: NONE DECLARED.

REFERENCES

- Fathi M. Study of safety situation of Kordestan University of Medical Sciences (2003). *Sci J Kurdistan Univ Med Sci.* 2003; 7(26): 37-41.
- Hanskamp-Sebregts M, Zegers M, Boeijen W, Westert GP, van Gorp PJ, Wollersheim H. Effects of auditing patient safety in hospital care: design of a mixed-method evaluation. *BMC health services research.* 2013; 13(1): 226.
- Mersini E, Novi S, Tushe E, Gjoni M, Burazeri G. Adoption of the who assessment tool on the quality of hospital care for mothers and newborns in Albania. *Acta Inform Med.* 20(4): 226-234.
- Brennan TA, Leape LL, Laird NM, Hebert L, Localio AR, Lawthers AG, et al. Incidence of adverse events and negligence in hospitalized patients. Results of the Harvard Medical Practice Study I. *N Engl J Med.* 1991; 324(6): 370-376.
- Kohn LT, Corrigan JM, Donaldson MS. To err is human: building a safer health system. National Academy of Science, Institute of Medicine. 2002.
- The Joint Commission. Sentinel Events (SE) in "Comprehensive Accreditation Manual for Hospitals: The Official Handbook". CAMH Refreshed Core; 2011. 11 March 2014; [Available from: http://www.jointcommission.org/assets/1/6/2011_CAMH_SE.pdf.
- Quinn C. The medical record as a forensic resource. Isfahan: Isfahan University of Medical Sciences, 2006.
- Habibzadeh S, Adib Hesami M, Mahmoodifar Y. A survey on hospital wastes management In Bookan, Mahabad, Saqqez, and Myandoab-western (Iran-2004). *Journal of Health Administration.* 2007; 9(26): 57-62.
- Grasso BC, Genest R, Jordan CW, Bates DW. Use of chart and record reviews to detect medication errors in a state psychiatric hospital. *Psychiatric services.* 2003; 54(5): 677-681.
- Bates DW, Boyle DL, Vander Vliet MB, Schneider J, Leape L. Relationship between medication errors and adverse drug events. *Journal of General Internal Medicine.* 1995;10(4): 199-205.
- Senst BL, Achusim LE, Genest RP, Cosentino LA, Ford CC, Little JA, et al. Practical approach to determining costs and frequency of adverse drug events in a health care network. *American Journal of Health-System Pharmacy.* 2001; 58(12): 1126-1132.
- Salarvand S, Meraci MR, Ghaedi F, Zamani M. Prediction of likelihood of ground falling in hospitalized old patients in Isfahan; by using Morse Fall Scale. *Scientific Journal of Kurdistan University of Medical Sciences.* 15(1): Pe63-Pe71, En8.
- Amerion A, Hamze Atani B, Mohebbi H. Investigation of Maintenance Management of Medical Equipment in Different in Selected Hospitals of Iran. *Journal of Military Medicine.* 2005; 39(9): 189-195.
- Noori Tajer M, Dabaghi F, Mohamadi R, Haghani H. A Survey of Maintenance and Cost of Medical Equipment in Hospitals Associated of Iran University of Medical Sciences and Health Services (2000-2001). *Iran J Med Sci.* 2002; 9(30): 445-454.
- Sweeney L. Replacing personally-identifying information in medical records, the Scrub system. *Proc AMIA Annu Fall Symp.* 1996: 333-337.
- Dyson E, Smith GB. Common faults in resuscitation equipment - guidelines for checking equipment and drugs used in adult cardiopulmonary resuscitation. *Resuscitation.* 2002; 55(2): 137-149.
- Mohseni A, Javadian M, Yonesian M, Gholami SH. Evaluation of collection, transfer and disposal of hospital solids waste government and private hospitals in Mazandaran province in 2001. *Journal of Mazandaran University of Medical Sciences.* 2001; 11(32): 45-52.
- American Academy of Pediatrics, American College of Emergency Physicians, American College of Surgeons Committee on Trauma, Emergency Nurses Association, National Association of EMS Physicians, National Association of State EMS Officials. Equipment for Ground Ambulances. *Prehospital Emergency Care.* 2014; 18(1): 92-97.
- Prehospital Emergency Care. Position Papers Equipment for Ambulances A Joint Statement from the National Association of EMS Physicians, the American College of Emergency Physicians, and the American College of Surgeons Committee on Trauma. *Prehospital Emergency Care.* 2007; 11(3): 326-329.
- Almeida Carlos Eduardo David de CAR, Curi Erick Freitas, Marques Louise Marcelle da Silva Almeida, Abarti Roberta Eleni Monteiro. Malfunction of the extracorporeal circulation system: case report. http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-70942011000600010&lng=en. <http://dx.doi.org/10.1590/S0034-70942011000600010>. *Rev Bras Anesthesiol.* 2011; 61(6): 781-785.
- Courdier Sb, Garbin O, Hummel M, Thoma Vr, Ball E, Favre R, et al. Equipment Failure: Causes and Consequences in Endoscopic Gynecologic Surgery. *Journal of Minimally Invasive Gynecology.* 2009; 16(1): 28-33.