Iranian J Publ Health, Vol. 43, No.6, June 2014, pp. 853-854

Letter to the Editor

Near Misses and Their Importance for Improving Patient Safety

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(Received 12 Feb 2014; accepted 23 Feb 2014)

Dear Editor-in-Chief

Establishing patient safety reporting systems is an important step for improving patient safety. Using such systems, healthcare organizations can collect, analyze, and share information about patient safety (1, 2). A variety of incidents including adverse events, near misses, and medical errors may be considered reportable (2); however, there are some controversies about near misses. Additionally, this concept has been defined differently.

WHO defines a near miss as "an error that has the potential to cause an adverse event (patient harm) but fails to do so because of chance or because it is intercepted" (2). According to the Institute of Medicine, a near miss is "an act of commission or omission that could have harmed the patient but did not cause harm as a result of chance, prevention, or mitigation" (1). "An error caught before reaching the patient" is another definition (3). I have reviewed more than 20 definitions; there is a general consensus that this concept should be used for indicating a type of incident that has the potential to result in harm but finally fails to cause harm. However, there are some serious controversies in details. Some definitions had an emphasis that a near miss is an incident that did not reach the patient at all because it was intercepted before reaching the patient; however, others emphasized that a near miss may reach to the patient but does not cause harm. Therefore, some researchers have focused on the interception of an error and others focused on the prevention of harm. These controversies may result in confusion as to weather a specific incident should be reported or not. A study suggests that we should distinguish two factors ("reaching the patient" and "patient harm") and define two separate concepts: "near miss" and "no harm incident" (4). This framework is appropriate but fails to consider the reason of interception or harm prevention (such as chance or intervention). We should consider this factor because it can provide different information about the incidents. Therefore, I suggest the following category.

A. Near misses

Type 1: An incident that does not reach to the patient because of formal and planned interventions and programs (previously developed by the organization)

Type 2: An incident that does not reach to the patient because of chance or unplanned interventions

B. No harm incidents

Type 3: An incident that does reach to the patient but does not cause harm because of early detection, interventions and treatment

Type 4: An incident that does reach to the patient but does not cause harm because of chance

The importance of reporting such incidents

Patient safety experts argue that the root causes of near misses and adverse events are similar (1, 5). Therefore, detecting root causes of near misses

can help us to correct these causes and prevent future adverse events. The goal of a reporting system is to identify and remove the root causes of incidents (not merely counting the events) and this can be achieved by near misses (1). Furthermore, a small percentage of incidents lead to adverse events. Thus, the emphasis on reporting adverse events results in a small database with insufficient data for analysis. Therefore, by reporting near misses, we can have a large database for analysis (1, 5).

Additionally, the reporters of near misses are not at the risk of blame, shame or legal litigation. Therefore, this may positively influence the staff willingness to report these incidents without any fear. Even, the reporters may be prized or awarded because of their efforts for preventing harm (2, 4).

Reporting such incidents can provide a variety of information about successful error management practices as well as weaknesses. The type 1 incidents are not indicative of organizational weakness. They indicate that the predetermined plans and actions are correct. Therefore, we can collect information to evaluate the effectiveness of such plans. Other three types of events indicate a weakness of the healthcare system (organization) for designing appropriate formal measures to prevent the continuation of the events. Therefore, we can collect information about our weakness in developing formal preventive mechanisms and the points in our process which need such mechanisms. Additionally, reporting the type 2 near misses help healthcare organizations to identify effective unplanned and accidental actions and make decisions to formalize them. The type 3 incidents help us to evaluate our detection and intervention procedures and increased use of resources for detecting and mitigating the events. Additionally, the type 4 incidents show the weakness of the organization in early detection of events after reaching to the patient. As I discussed above, each of these four types of incidents provide different information and viewpoints about healthcare errors, and error management practices. In conclusion, near misses and no harm incidents can provide valuable information much of which cannot be captured by adverse event reporting systems, therefore, reporting such incidents should be encouraged; however, necessity of developing a large database and employing more staff for data management should also be considered.

Acknowledgements

The authors declare that there is no conflict of interests.

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