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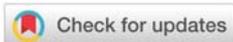E-mail: Moghaddasi@sbmu.ac.ir

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Research Article

The role of World Health Organization and Information Technology in improving patient safety through reducing medical errors

When it comes to medical errors, everyone cites the statistics provided by the Institute of Medicine. The statistics is provided continually by the American Medical Community and reflects their tendency in reducing medical errors and increasing the level of patient safety [1-4]. However, most countries in the world try to hide the inefficiency of the members of their health care team, especially physicians [5-8].

The term "medical error" is associated with medical inefficiency, but its definition indicates the possibility of an error by any member of the health care team, including the physician and nurse [9]. Therefore, it is suggested that the term "Health care error" be used to refer to care inefficiency by any members of the care team, regardless of their particular field of specialty, whereas field oriented terms like "nursing errors" or "medical errors" could be used to indicate errors happening in any specific subfields of health care. With this reasoning, the phrase "medical errors" that has been used in this text, would refer to the errors related to medical discipline.

Another important point to keep in mind is that the damage caused by the inefficiency of professionals in different scientific areas are not of the same scale and weight; if so, then the errors made by those in the medical domain could be highly threatening. The destructive effects pertaining to inefficiencies of the medical sciences professionals, and some of the social sciences professionals could be more detrimental than the inefficiencies of those in the technical disciplines in terms of the extent and duration of the destructive effect.

For example, if a civil engineer makes a mistake in his calculations, the extent of the destructive effects is within the range of a built bridge, and the duration of the destructive effects is quite short and instantaneous. While the extent of the damage caused by inefficiency of a doctor, nurse, laboratory specialist, and other health care providers could involve a large part of society, with long-lasting effects.

If the medical education system, including the curriculum and the teachers, has a high quality of expertise, then there are several factors causing health care errors that can be categorized into three groups: the complexity of the health care system, the design of the system and processes, and the ergonomic and human factors [10]. Complex technologies, powerful drugs, intensive care, and long-term hospitalization are the things that emphasize the complexity of the health care system.

Cognitive errors and sleep deprivation also indicate human factors and ergonomics [10]. The health care is the only industry that does not believe that fatigue diminishes performance [11].

Poor communication and unclear lines of authority of physicians, nurses, and other care providers, as well as the disconnected reporting systems within a hospital can result in fragmented systems in which numerous hand-offs of patients results in lack of coordination and errors.

Developed countries have developed proactive measures to reduce health care mistakes through the development of guidelines, protocols, and procedures, and execution of health care audits based on high quality medical records, self-disclosure as disclosure or open disclosure, the production and use of modern tools and devices such as point of care systems based on information technology, the use of information technology, and development of well-designed computerized health information systems [12-17].

These kinds of errors are a major cause of many deaths and injuries due to the lack of an assured system for monitoring

physicians' documentation. Medical error is like an octopus that crawls quietly at night and swallows its victims gently. In these societies, patient is like a laboratory mouse who, due to lack of good medical practice (GMP) and not using diagnostic and therapeutic guidelines and protocols, is treated based on trial and error method whose safety may in turn be exposed to serious risks [18]. The supportive factor of this problem is the lack of a medical audit mechanism which should principally be based on the available high quality medical record.

The most important thing to keep in mind is that, in a large part of the world, the safety of patients such as a precious entity does not have a protective shell and therefore includes serious risks and irreparable damages due to the lack of vigilant supervision. In many parts of the world, medical errors are at the top of all health care mistakes due to the presence of medical professionalism and doctor dominance.

The deliberate unwillingness of physicians in these communities to document their diagnosis process and the procedures they have taken to their patients precisely and accurately generate incomplete and inadequate medical records which makes the medical audit mechanism ineffective, even if it is provided in the structure of health care institutions. In most of these communities, even if the healthcare organizations carry out quality analysis of healthcare data by the information management unit, due to the deliberate unwillingness of physicians to provide adequate medical records, there is no possibility to audit the quality of medical servicesto promote patient safety level [19].

Due to lack of attention to use the care quality indicators (such as: re-admission rate, hospital infection rate, post-operative infection rate, autopsy rate,) and lack of accurate reports or, in other words, because of incomplete and vague reports, the statistics of medical errors in these countries are unknown; therefore, according to the medical community's saying of these countries, the statistics indicate few and unimportant errors [20].

Lack of accreditation mechanism of health care organizations in some countries of the world, or lack of evidence in the selection of criteria for this type of assessment, has made it impossible to identify health care errors, especially medical errors [19]. This issue has decreased the potential of improving level of patient safety in the three axes of the accreditation program such as: Health care services, information management, and facilities [21].

The weakness of organizational structure of health care institutions in these countries do not provide feedback to the community about the quality of services received. This weakness is the result of medical dominance since a physician as dean of a hospital or health care institution is simply an absolute decision-maker. The lack of a trustee board encompassing a representative of a neighborhood or urban area represents a weakness in the organizational structure of the health care institutions in these communities [18-20].

Lack of communication with customers which are the patients and their families reflects ignoring the voice of the customer clearly. The lack of major committees such as the Executive Committee, the Health Care Audit Committee, the Information Management Committee, the Infection Committee, the Mortality Committee, the Autopsy Committee, the Risk Management Committee, the Utilization Management Committee, and other committees causes that monitoring of issues leading to health care errors be impossible [20].

One of the most obvious and serious professional mistakes is the incomplete execution of the work. In most developing countries, it is neglected to specify a discharge program and serious attention to follow-up of patient. For this issue many people especially those with a serious disease such as cancer, do not only suffer multiple complications, but also lose their lives. It is promising that the significant influence of information and communication technology on the daily lives of people, in particular the proliferation of smart phones, as well as the advent of the network or social media, has allowed the dissemination of health care errors, especially medical errors, among the people of the community. Thus, there is a great deal of hope for managing health care services in developing countries.

The warning message of this text is to highlight the role of the World Health Organization in reducing health care mistakes, especially medical errors in the world through establishing international regulations, standards, and ongoing monitoring and evaluation. Forcing the world's countries to follow a few points can make the World Health Organization more successful in improving the health of the world's people, increasing the level of patient safety, and reducing health care errors, especially medical errors. The most important tasks that the World Health Organization can do to reduce health care errors and increase the level of patient safety are:

- To prepare a standard accreditation program based on three aspects: quality service provision, the availability of seamless and efficient equipment, and patient information management. WHO should conduct a random and annual assessment of such a program performed in one of the hospitals in the countries with high risk of health care errors.

- To oblige countries to change the structure of their health care organizations management from a chairman to the trustee board, emphasizing the need for the presence of a representative of the neighborhood or region in the board.

- To force the healthcare institutions to carry out audits of health care services, in particular medical services audits.

- To force the Ministry of Health of the developing countries to closely monitor patients' follow up, and identify the discharge program for each patient.

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