

Letter to the Editor

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Challenges of Utilizing the Primary Health Safety Index Tool for Assessing the Vulnerability of Healthcare Centers to Disasters

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As important infrastructures in every community, hospitals and healthcare centers are required to continue their operation during normal and disastrous situations and respond to the situation and provide services for the injured. In 2008, the hospital safety index (HSI) was proposed by the Pan American Health Organization (PAHO) for evaluating the safety of hospitals and healthcare facilities in potential hazardous situations. The hazards threatening these facilities can be identified using a checklist, and categorized as structural, non-structural and functional vulnerability while considering their likelihood of occurrence, frequency, harmful outcomes and numerical estimate of damage (1).

In 2016, risk and safety assessments in disasters were performed in 280 healthcare centers affiliated to Ilam University of Medical Sciences, Ilam, Iran, including 204 medical homes, 66 comprehensive urban and rural health centers and 10 district health centers. The present research was conducted using the hazard assessment guidelines developed by the Iranian Ministry of Health (2). The results revealed that geologic hazards, climatologic threats, epidemics and traffic accidents were respectively the most frequent hazards threatening healthcare centers in Ilam province. Moreover, the levels of the structural, non-structural and functional safety of the healthcare centers were respectively found to be 20.34%, 27.67% and 21.53%. The overall safety of the health centers was also estimated at 22.79%. In fact, the safety level received a score of 3 out of 10. Hatami et al. obtained a safety index of 4 out of 10, and found the level of functional safety to be 51.48%, that of structural safety 33.97%, that of non-structural safety 54.82% and that of overall safety 43.72% (3). Moreover, an evaluation of the safety level of Iranian health centers in the face of disasters in 2015 reported a functional safety level of 29%, a structural safety level of 36%, a non-

structural safety level of 21% and an overall safety level of 29% (4). The safety levels of healthcare centers in Ilam province were therefore lower than those reported as the national mean safety indices. In addition, the present results were expressed through their root cause analysis. The unsatisfactory preparedness level of healthcare centers in Ilam province on a national scale based on the hazard assessment guidelines developed by the Ministry of Health can be attributed to the following factors:

- 1) The very old building structures of the health centers contributing to lower safety and higher risks
- 2) Failing to complete the checklists according to the instructions provided for national assessment tools; the checklists should have been completed by skilled, well-educated experts who were informed of how to use the instruments and how to complete the checklists.
- 3) The invalidity of the obtained results associated with completing the checklists by experts of the Deputy of Health and subsidiary units, who lacked knowledge about structural engineering and building architecture. In fact, the intrinsic features of some of the instruments required asking for assistance from engineering experts such as architects, civil engineers and urban engineers to complete the checklists; nevertheless, financial limitations prevented the use of specialist expertise.
- 4) Failing to take the necessary measures to promote the safety and efficiency of the healthcare centers despite the neglect reflected in the annually-completed preparedness assessment tools; the annual status of safety and preparedness of healthcare centers in Ilam was reported to be unsatisfactory.
- 5) As a major component of management, control is a combination of actions required for identifying strengths, weaknesses, threats and

opportunities through monitoring and evaluating the processes and solving the system problems by performing appropriate intervention. The improvement of the status quo is not guaranteed unless controls lead to interventions. The results obtained through assessing the preparedness and safety of hospitals appear to have not affected the strategic programs, policies and procedures of the health system authorities in a way that safety levels are enhanced in healthcare facilities. The policy makers are therefore recommended to revise the methods used to take advantage of this information.

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CONFLICT OF INTEREST

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