Assessment of Emergency Department Response Capacity in the Face of Crisis; a Brief Report

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Abstract

Introduction: The present study was done aiming to assess and identify methods of increasing the capacity of emergency department (ED) and therefore, enhancing the efficiency of Alzahra Hospital, Isfahan, Iran, as a whole in facing a disaster with high mortality rate. Methods: This descriptive study was carried out in 2014 in Alzahra teaching hospital, Isfahan, Iran. Indices such as mean percentage of occupied beds in ED, patients’ ED length of stay, triage status, bed turnover interval, and available space, as well as the number of patients that can be discharged from emergency or dispositioned to other wards in 4-6 hours were determined. Then according to the number of beds in hospital, radiology ward, and operation rooms, the number of outpatients, critically ill patients, and those in need of critical care were determined. Then the possibility of reverse triage was evaluated and the number of patients who could be discharged was calculated. Results: The total number of admitted patients in 2013 was 50836, 6444 of which were outpatients and 44392 needed emergency services. ED admissions in 2013 included 20125 (45.3%) cases of acute surgery, 8890 (20%) cases of acute internal patients, and 6215 (14%) cases of sub-acute patients. The longest stay based on the status of patients belonged to acute internal patients with a mean of 35.9 hours length of stay. The total number of available emergency beds is currently 80. On the other hand, based on the number of admitted and discharged patients in 2013, mean emergency bed occupation rate was 92.3%. Mean length of ED stay was 14.2 hours in 2013, and bed turnover interval was 1.3/day. Conclusion: Regular admission capacity of ED includes 13 extra beds and 30 critical condition beds. In addition, if reverse triage could be done to discharge sub-acute patients from ED, 22 beds can be added. Considering the occupation percentage of ED beds, there are about 5 empty beds and therefore, based on available resources, the expandable capacity of ED is 68 beds.

Key words: Emergency department; crisis; hospital bed capacity; triage