

UNDER/OVER TRIAGE OF TRAUMA PATIENTS IN ARIZONA

Traumatic injury occurs when a person is severely hurt by an external force. Some examples of this are falls, car crashes, or gunshots. These severely injured patients should receive treatment at trauma center to reduce death and disability. A functioning trauma system provides the right care to the right person at the right time.

Over triage occurs when a patient receives more care than necessary; they use costly, high level care for a non threatening condition. Under triage occurs when a severely injured patient fails to get the necessary care.

Using 2011 data,^{1,2} Arizona identified the under/over triage that occurs in the state. Patients with an Injury Severity Score (ISS) **greater than 15 were considered severely injured**. Patients with an ISS **less than or equal to 15 were considered to be a less severe injury**. An ISS score ranges from 1-75 and is calculated by looking at the three areas that are most damaged.

UNDER TRIAGE = 27%

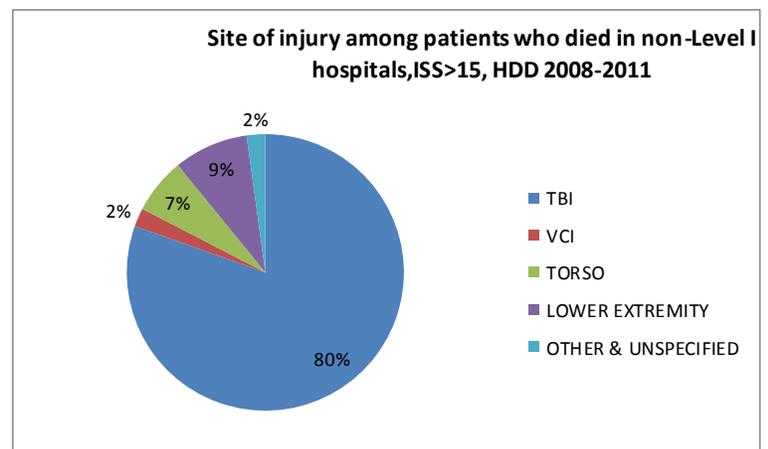
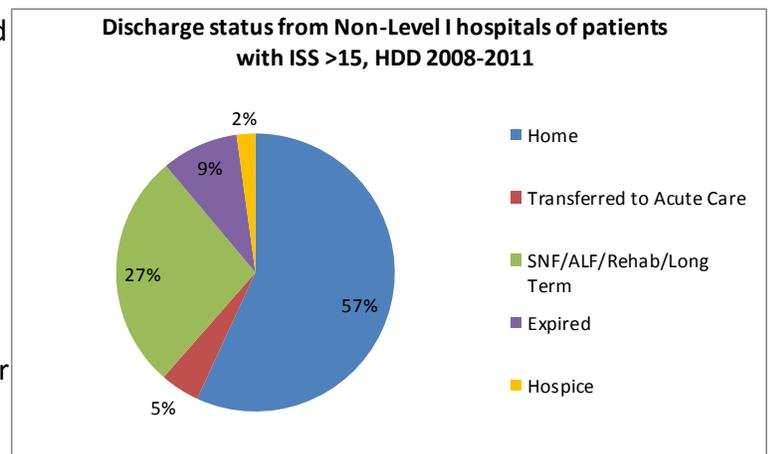
Trauma centers have dedicated staff trained to care for severely injured patients. A patient is under triaged when they have an ISS > 15 and were not immediately transferred to a Level I Trauma Center.

In 2011, 27% (415/1,521) of severely injured patients were under triaged. Of the 415 patients, 9% died during their hospital stay, 2% were discharged to hospice, and 5% were transferred to an acute care facility after admission. The under triaged mortality for severely injured patients was 11%; this is higher than that seen at a Level I Trauma Center (8%).

Of the 46 deaths seen in under triaged patients, 80% had suffered traumatic brain injury (TBI). Most TBIs were due to falls (89%) and involved the elderly (≥65 years) (86%).

OVER TRIAGE = 35%

Over triage could be due to less severely injured patients arriving at Level I trauma centers by EMS transport directly from scene, or transfers from non-Level I hospitals. In 2011, 35% (6,344/18,043) of less severely injured patients (ISS ≤ 15) were over triaged (treated and discharged home from Level I Trauma Center emergency department). This number (6,344) suggests that almost fifteen times number of patients are over-triaged than are under triaged (415).



¹Hospital Discharge Database, 2011; ²Arizona State Trauma Registry, 2011