

“Cribari Grid” Methodology

The ‘Cribari Grid’ is a tool created to help trauma programs evaluate their overall Over- and Under- triage rates. This methodology uses the ISS (injury severity score) and levels of trauma team activation to categorize the trauma population for a certain time period. This method is often used to help determine if the appropriate resources are available for the seriously injured patient which is an important indicator for quality care. Conversely, this method can help identify whether scarce resources are utilized for patients who may not have needed them which is a cost indicator.

The procedure for using the Cribari Grid:

1. Inclusion: trauma patients from a desired time period (monthly or annually)
2. Exclusion: patients without a ‘codable’ ISS
3. Analyze this group by cross tabulation of ‘Team Activation Type’ and ISS categories
 - a. Team type is stratified by highest level of activation and all others (limited team or no team)
 - b. ISS category is stratified by ISS 1-15 and 16 - 75

Example:

Team Type/ISS	ISS 1 - 15	ISS 16 - 75	Total
Full/Highest Level	(a) 10	20	(b) 30
Limited or No Team Activated	185	(c) 15	(d) 200
Total	195	35	230

4. Over-triage calculation: Divide # of highest level team activated with ISS < 16 by total # of highest team patients (a/b) in this example: $10/30 = 33\%$
5. Under-triage calculation: Divide # of patients with ISS > 15 and with no team or modified team activated by the total # of pts with no/modified team (c/d). In this example: $15/200 = 7.5\%$

The ACS-COT’s “*Resources for Optimal Care of the Injured Patient: 1999*” recommends a trauma program establish a goal to maintain under-triage at or below 5% and that to do that, an over-triage rate may be tolerated up to 50%.

Because this method uses ISS, which is determined at discharge, to evaluate resources deployed upon arrival, this tool acts as a filter to identify cases which require further review. The threshold of 50% over-triage compensates for the variances of coding and inconsistencies of trauma center team activation criteria.

The tool identifies the cases which fall out as potential over and under triage, that then should undergo a much closer review to identify if the triage criteria were met.

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