

DOI: 10.21767/2471-8505.100116

## Injury Near-Miss and Quality of Trauma Care

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Received date: July 20, 2018; Accepted date: September 19, 2018; Published date: September 26, 2018

Citation: Thanni LOA (2018) Injury Near-Miss and Quality of Trauma Care. J Intensive Crit Care Vol.4 No.3:14

### Commentary

Violence and injury remains a contemporary trauma care subject. The burden, characteristics and outcome of injury vary from low/middle income to high income countries [1]. However, the prevalence is increasing, especially in low and middle income countries. This is due to increasing motorisation and firearm injuries [2].

Hitherto, outcome of trauma care has been assessed by mortality rates which range from 2 to 32 %. Due to improvements in pre-hospital and in-hospital care, mortality rate has declined over the years but the usefulness of this measure of quality of care has also reduced. The realisation that death occurs from inadequate or suboptimal trauma care; has resulted in the need to develop care performance measures that truly reflect the burden of the condition as well as areas of necessary improvement such as policy making, treatment guidelines and post hospital care.

There are different scores for measuring the severity of injury. Scores such as AIS (Abbreviated Injury Score) and ISS (Injury Severity Score) quantifies anatomical injury while others such as TRISS (Trauma and Injury Severity Score) measure physiological impact of trauma in addition to anatomical injury. These scores are designed to predict mortality outcome thus limiting their value.

There are different aspects of trauma care. These include injury prevention, pre-hospital care including transportation, in-hospital care, rehabilitation and reintegration into the community. Performance indicators have been introduced to better measure trauma care and its outcome. These indicators measure these aspects which can be grouped into three; the structure of trauma care systems, the process of trauma care as well as outcome of care [3]. However, none of these indicators are universally acceptable. Over one thousand five hundred performance indicators had been identified but a systematic review shows no strong evidence to support their use as measure of quality of trauma care [4].

Trauma is not a single disease entity or condition. It is a collection of diverse conditions of ill health which outcome depends on trauma care systems, care processes and patient characteristics such as age, physiologic and comorbid conditions in addition to the severity of injury. Some injuries are severe enough to result in complications that threaten life and survival depends on adequate and timely intervention. If patients with such injuries and complications can be identified using simple markers that are involved in routine care, then intervention can be better planned and implemented in a clinical setting.

This is the basis for introducing the concept of severe acute injury morbidity SAIM (also called "near-miss injury morbidity") [2]. The indicators proposed for identifying SAIM are categorised into two: organ system dysfunction and treatment intervention. Preliminary findings indicate that there are twice as many injured persons at risk of death as there are those who died. The burden of the problem is at least twice what mortality statistic suggests. Severe acute injury morbidity index tends to be higher than mortality index [2]. This concept takes into consideration that outcome depends on combination of the severity of injury/physiological response of the body as well as the quality of care available. As such results are likely to be comparable for different trauma care settings.

### References

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