Trauma Code

Dr Zohair Alaseri FRCP
Emergency & Critical Care Medicine

Trauma Code

Introduction

The Trauma Code Activation Protocol contains predetermined guidelines for an interdisciplinary team approach to the initial care and management of the trauma patient.

What is the point of Trauma Call Activation?

- Likely to reduce mortality
- Likely to expedite a life/limb saving procedure

Trauma Code

- The majority of trauma deaths occur either before reaching the hospital or within four hours of arrival.

- Emergency Department personnel must make rapid triage decisions based on preestablished system standards.

Trauma Code

- The aim of the trauma team is to provide a safe and efficient evaluation of the patient.
- Identify all injuries and instigate definitive management of such injuries.
- The golden hour starts at the time of injury. So most trauma teams will have about 30 minutes to accomplish this and should work towards achieving this goal.

Trauma Code

Purpose:

To provide standard criteria for the triage of trauma patients, the activation of the appropriate trauma team to support the standard Emergency Department Team.

Trauma Code

The primary objectives of the protocol are to:

- Provide clearly delineated roles and responsibilities for members of the Trauma Resuscitation Team.
- Establish and utilize Advanced Trauma Life Support principles as the standard of care for the trauma patient.
- Assure rapid, efficient, systematic evaluation and treatment of the patient.

Trauma Code

The primary objectives of the protocol are to:

- Establish assessment and management priorities based on the patient's physiologic condition, injuries, stability, and mechanism of injury.

- Establish and maintain clear lines of communication within the team that will guarantee an accurate flow of information throughout the continuum of care.

Trauma Code

Procedure:

Trauma Code: Should be initiated by the ED Consultant upon a report of a pending arrival or upon arrival of the trauma patient meeting the following criteria.

A Trauma Code may be upgrade or downgraded at any time as the patient's condition dictates.

Trauma Code

Procedure

The Core Trauma Team is that group of professionals that receives and treats the patient.
This includes :

Nursing Supervisor (after hours)

Team Leader
Anaesthetist
RT
General Surgeon
Radiologist
Emergency Physician
Critical Care Physician
Two Nurses. (Three if no RT)
Radiographer
Scribe

Additional staff outside of this group need to be mobilized to provide ancillary services
Porters - to run samples to the lab, collect blood etc

Trauma Code

Procedure:

Staff, while not necessarily involved in every trauma call, need to be available to the trauma team immediately :

Neurosurgeon
Thoracic Surgeon
Plastic Surgeon
Radiologist

Certain areas need early notification of the trauma victim.

CT Scanner
Theatres

Trauma Code

Procedure:

- The core trauma team comprises 10 people working around a single patient.
- It is vital that everyone knows their place and their tasks, and has the skills, equipment and support to accomplish these.
- The trauma room should be quiet so that the voice of the team leader can be heard and assessments from team members can be relayed back to him.
- Vital signs should be called out every five minutes and these must be heard by everyone.

Trauma Code

The Team Leader

The Team Leader should not touch the patient.
Instead he acts as conductor of the orchestra.
Responsibilities of the team leader :

- Obtain history from paramedics.
- Direct team members in their actions.
- Establish priorities for investigation and management.
- Order or authorize investigations and procedures.
- Keep track of whole state of the patient.
- Receive and interpret all results of investigations
- Order fluid or blood administration.
- Supervise spinal manoeuvres.
- Consult with other specialities.
- Decide on appropriate disposition.
- Talk to relatives.
- Write in the notes.
- Record audit information.
- Dismiss and debrief team members.
- Educate trauma team.

Trauma Code

The Team Leader

The trauma team leader should be the most experienced team member present before the patient arrives in hospital.

The leader's role should not be superseded by late arriving members or passing senior staff.

This avoids confusion for the team members of who to take direction from and who to report to.

Trauma Code

Procedure:

Nursing staff

If their is no RT on the trauma team, one nurse should be solely dedicated to the anaesthetist.

Otherwise nurses should attach themselves individually to each hands-on surgeon or ED physician and assist in their tasks.

The nurses should not have to leave the resuscitation room to fetch equipment or run samples to the labs.

Ancillary staff should be outside the main resus area to provide this.

Trauma Code

Procedure:

Radiographer

The radiographer should immediately start with the trauma series of X-rays, in the order Cervical Spine, Chest and Pelvis, unless directed otherwise by the team leader.

Once these have been processed, other views may be required by evidence of other injuries. The radiographer should also act as liaison to the CT scanning department.

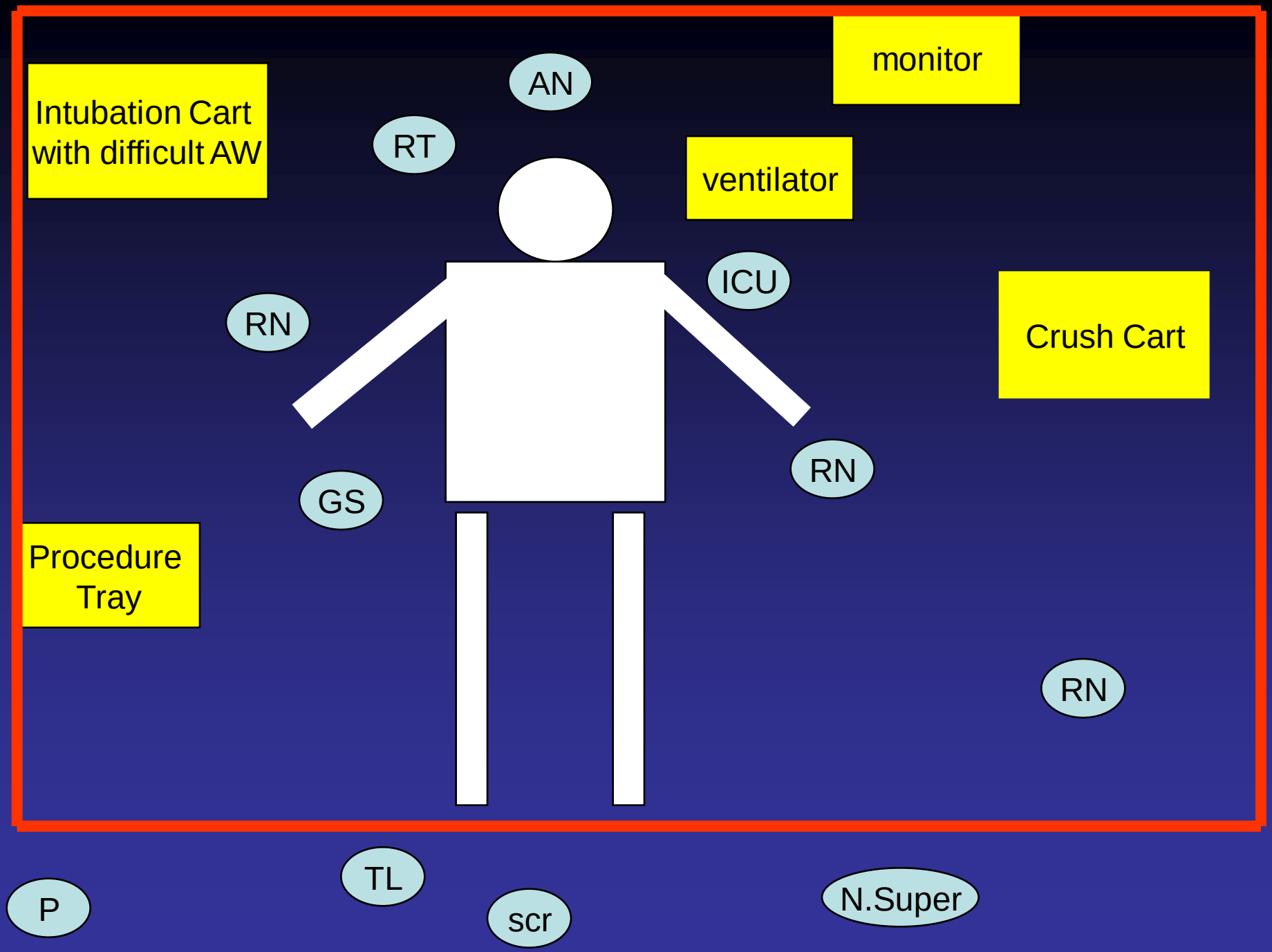
Scribe

The scribe is responsible for the full record of the trauma call.

They should be situated near the team leader so that all information passing through the leader is then passed to the scribe.

Records must include :

- Time of arrival.
- Mechanism of injury.
- Personnel present at call
- Physical findings
- Vital signs. Urine output. Glasgow Coma Scale.
- Results of X-rays and other investigations.
- Fluids administered.
- Drugs administered.
- Previous Medical History.
- Summary of injuries.
- Disposal of patient.


monitor
AN
Intubation Cart with difficult AW
RT
ventilator
ICU
RN
Crush Cart
RN
GS
Procedure Tray
RN
TL
P
scr
N.Super

Trauma Code

Definition of Major Trauma-Adult

a. Shock / hypotension – SBP < 90 mm/Hg (Multisystem Blunt or Penetrating Trauma With Unstable Vital Signs and or GCS<14
b. Respiratory distress /Airway compromise OR Mechanism of injury that could lead
to airway compromise (this includes all intubated patients or where there is an
inability to intubate).
c. Penetrating Injury of head, neck, torso, groin
d. Unresponsive (Glasgow Coma Scale < 8) with potential for multiple injuries
e. Traumatic arrest
f. Two or more proximal long-bone fractures
g. Open and depressed skull fracture
h. Proximal amputations

Initiate Trauma Code Activation

Trauma Code

Definition of Major Trauma-Adult

i. Vascular compromise
j. Stab wound to head, neck, or torso
k. Major burns or burns with trauma
l. Spinal cord injury – with paralysis
m. Crushed pelvis/chest
High energy event
n. Falls > 3 meters.
o. Auto/bike or auto/pedestrian, Rollover mechanism
p. Ejection from vehicle
q. Death at the scene
r. Severe deformity of the vehicle

Initiate Trauma Code Activation

Trauma Code

Definition of Major Trauma-Adult

s. Penetrating injury to extremity
t. Unstable pelvis or Pelvic ring fracture
u. Single femur fracture
v. Spinal fracture
w. Pregnancy > 20 weeks
x. Significant concern for thoracoabdominal injury
y. Burns > 20% TBSA (2nd or 3rd degree) or involving face, airway.
z. Flail chest

Initiate Trauma Code Activation

Trauma Code

PERFORMANCE IMPROVEMENT

1. Track record:

On Initial Designation: we must have completed at least six months of audits on all qualifying trauma records with evidence of “loop closure” on identified issues.

Compliance with internal trauma policies must be evident.

On Re-designation: we must show continuous PI activities throughout the designation and a rolling current three year period must be available for review at all times.

Trauma Code

PERFORMANCE IMPROVEMENT

2. Minimum inclusion criteria:

All trauma team activations (including those discharged from the ED), all trauma deaths or dead on arrivals (DOAs), all major and severe trauma admissions; transfers-in and transfers-out; and readmissions within 48 hours after discharge.

Trauma Code

PERFORMANCE IMPROVEMENT

3. An organized trauma PI program to include a pediatric-specific component and trauma audit filters

a. Audit of trauma charts for appropriateness and quality of care.
b. Documented evidence of identification of all deviations from trauma standards of care, with in-depth critical review.
c. Documentation of actions taken to address all identified issues.
d. Documented evidence of participation by the
e. Morbidity and mortality review including decisions by the TMD as to whether or not standard of care was met.
f. Documented resolutions "loop closure" of all identified issues to prevent future recurrences.
g. Special audit for all trauma deaths and other specified cases, including complications, utilizing age-specific criteria.
h. Multidisciplinary hospital trauma PI committee structure in place.

Trauma Code

PERFORMANCE IMPROVEMENT

4. Multidisciplinary trauma conferences, continuing education and problem solving to include documented nursing and pre-hospital participation

5. Feedback regarding major/severe trauma patient transfers-out from the ED and in-patient units shall be obtained from receiving facilities.

6. Trauma registry - data shall be forwarded to the state trauma registry on at least a quarterly basis.

Trauma Code

PERFORMANCE IMPROVEMENT

7. Documentation of severity of injury (by Glasgow Comma Scale, revised trauma score, age, injury severity score) and outcome (survival, length of stay, ICU length of stay) with monthly review of statistics.

Trauma Code

PERFORMANCE IMPROVEMENT

8. Participation with the regional protocols (red cresent) PI program, including adherence to regional, review of pre-hospital trauma care.

9. Times of and reasons for diversion must be documented and reviewed by the trauma PI program.