

Changes in Alpha and Bravo Criteria

Created by Duncan Donald, MD
Trauma Medical Director, Trauma System of Care
Bureau of Acute Care Systems

WHAT?

- Alpha and Bravo Criteria Change
 - > Change in what injuries/conditions considered ALPHA and what is considered BRAVO
- Destination Guidelines for EMS are separate and have fewer changes. EMS services are having their own training for these changes.

WHEN?

- Once approved by MS State Board of Health
 - > Anticipated to approve Jan 2018
- Target date of initiation statewide
 - > MARCH 1, 2018

WHERE?

- ALL trauma centers in Mississippi Trauma System
 - > Level I, Level II, Level III, Level IV hospitals

WHY?

- Revised Alpha and Bravo activation criteria bring us in line with ACS guidelines published in the “Orange Book,” Resources for Optimal Care of the Injured Patient: 2014 (most recent edition)
- Examined/Reviewed/Approved by trauma surgeons, ER physicians, and Miss. Trauma Advisory Committee

NEW ALPHA CRITERIA

- SBP < 90 mmHg (adults), or age-specific hypotension in children
- Intubated patients from scene, or Respiratory Rate < 10 or >29, respiratory distress, need for intubation/ventilation
- GCS < 9 (due to trauma)
- Gunshot wound to neck, torso, upper arm (above elbow) or upper leg (above knee). **NOT HEAD** (significant GSW to head will trigger alpha due to low GCS)
- Patients transferred receiving blood to maintain vitals (with trauma mechanism)
- Emergency Physician/Hospital Provider judgement

WHAT IS NO LONGER ALPHA?

- GCS 9-13
- Knife stab/penetrating wound (except GSW)
- Flail chest
- Pelvic fracture
- Pulseless/mangled/degloved/amputated extremity
- Two or more long bone fractures
- Paralysis

Just to name a few.....

New Alpha Criteria

- STABLE intubated patients transferred from another hospital are NOT alpha unless meet other criteria.
- If an ER Physician/Provider thinks it should be Alpha, call it Alpha.

New BRAVO Criteria

- Most of prior Alpha criteria are now Bravo criteria
- Bravo patients may deteriorate and be upgraded to Alpha

NEW BRAVO CRITERIA

- ◉ Penetrating injury (not laceration) to head/neck/torso/extremity proximal to elbow or proximal to knee (if GSW, **alpha**).
- ◉ Flail chest
- ◉ Two or more proximal long bone fracture (humerus, femur)
- ◉ Crushed, degloved, or mangled extremity
- ◉ Amputation proximal to wrist or ankle
- ◉ Open or depressed skull fracture
- ◉ Paralysis or spinal cord injury secondary to trauma
- ◉ Unstable pelvic fracture
- ◉ Fall > 20 ft in adults, or in child <16 more than 10 ft or 2-3 times the height of child
- ◉ Fall from any height if anticoagulated older adult (i.e., age >65, anticoag other than aspirin)
- ◉ High risk MVC
 - > Intrusion, including roof: > 12 inches occupant site; intrusion > 18 inches any unoccupied site
 - > Ejection (partial or complete) from vehicle
 - > Death in same passenger compartment
 - > Auto vs. Pedestrian/bicycle (separation with significant impact)
- ◉ Motorcycle/ATV/UTV >20mph
- ◉ High energy dissipation or rapid deceleration including: ejection from motorcycle/ATV/animal; striking fixed object with momentum; blast or explosion
- ◉ Burns >10% BSA (second or third degree) and/or inhalation injury
- ◉ Suspicion of hypothermia, drowning, or hanging (secondary to trauma)
- ◉ Suspected non-accidental trauma (i.e., child/elder abuse)
- ◉ Blunt abdominal injury with firm or distended abdomen or with seatbelt sign (i.e., suspected intra-abdominal injury)
- ◉ Emergency Physician/Hospital Provider Judgement

Who Decides Alpha vs. Bravo?

- **HOSPITAL PERSONNEL** will get EMS report and determine if the patient needs Alpha or Bravo activation
- Each hospital can designate person(s) to activate based on the statewide criteria
- Activation comes from the **HOSPITAL, not EMS**

Example 1

- 26 yo male, unrestrained driver, passenger dead, HR 110, BP 115/75, O2 sat 95% on 3 L, intoxicated, left thigh deformity
- ALPHA OR BRAVO?

BRAVO

Example 2

- 18 yo male stab wound left upper quadrant, HR 130, RR 28, BP 86/42, O2 sats 93% on room air
- ALPHA OR BRAVO?

ALPHA (SBP below 90)

Example 3

- 78 yo female on Coumadin same height fall, no LOC, complains of headache, GCS 15 at EMS arrival but now responds to pain with opening eyes, localizing pain, and not speaking. HR 68, BP 140/86, RR 14, O2 sats 92%
- ALPHA OR BRAVO?

ALPHA

GCS now 8

Example 4

- 67 yo male s/p MVC, unrestrained driver, complains of chest pain. HR 135, BP 138/92, RR 36, O2 sats 88% on 4L. Appears to have flail chest. Progressive tachypnea.
- ALPHA OR BRAVO?

ALPHA

Respiratory distress (low sat, tachypnea, prob needs intubation)

Example 5

- 92 yo female same height fall, on Plavix, complains of pain over left hip/pelvis. HR 72, BP 145/90, RR 12, O2 sats 98%
- ALPHA OR BRAVO?

BRAVO

Presumed pelvic fracture now bravo

Example 6

- 32 yo male s/p MVC, transferring from outside hospital. HR 108, BP 93/48, O2 sats 99%, Intubated. Left arm and thigh deformity splinted. Receiving 2nd unit of PRBCs
- ALPHA OR BRAVO?

ALPHA

Receiving blood to maintain vitals

Example 7

- 3yo female fell in burning brush pile, burns over bilateral legs, entire back, back of arms. Alert but crying. HR138, BP 132/88, RR 16, O2 sats 98%
- ALPHA OR BRAVO?

Bravo

More than 10% BSA burn

Example 8

- 36 yo male s/p self inflicted GSW to head. Intubated at scene. HR 96, BP 148/76, RR 12, O2 sats 100%. GCS 3.
- ALPHA OR BRAVO?

ALPHA

GCS less than 9, and intubated from scene

Example 9

- 42 yo motorcycle rider s/p auto vs. motorcycle, mangled RLE with no palpable pulse. HR 118, BP 158/96, RR 23, O2 sat 99%. GCS 15.
- ALPHA OR BRAVO?

BRAVO

Pulseless, mangled extremity now bravo

Example 10

- 54 yo construction worker, fall from roof. Alert. Unable to feel or move legs. HR 45, BP 98/48, RR 12, O2 sats 100%
- ALPHA OR BRAVO?

BRAVO

Paralysis now bravo. SBP above 90.