

START Rapid Triage

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If any of these incidents occurred in your community would you be able to triage multiple casualties arriving into your emergency department in a timely fashion?



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Objectives

- List the four levels of triage
- Explain the differences between each level
- List the three criteria used in the triage process
- Demonstrate the ability to rapidly assess and assign a triage level to adults utilizing the START Rapid Triage system
- Demonstrate the ability to rapidly assess and assign a triage level to children utilizing the JUMP-START Rapid Triage system

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Goal of Multicasualty Triage

*“To do the best for the most
with the least.”*

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START Triage



- Use a triage system in an MCI that parallels normal routine-but quicker
- Practice regularly to ensure familiarity
- Triage is a continual process
- Re-triage all victims transported by EMS
- Set up triage area near the ED entrance
 - Shielded and secure
 - Readily accessible

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Triage

- “Greatest good for the greatest number of casualties”
- Psychological impact
- Classification:
 - Red** **Yellow** **Green** **Black**
- Limitations:
 - Time consuming START will help decrease time spent triaging each casualty
 - User variability- using START will help
 - Lack of familiarity- Need to practice!

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START Triage

TRIAGE CRITERIA:

- Respiratory status
- Perfusion and pulse
- Mental status

TRIAGE CATEGORIES:

- Walking wounded - “**Green**” or minimal (relocate when told)
- Normal findings - “**Yellow**” or delayed (unable to relocated)
- Abnormal - “**Red**” or immediate
- Non-salvageable - “**Black**” or expectant

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START

- Triage categories:
 - **Black** (*dead or nonsalvageable*)
 - **Red** (*immediate*)
(*delayed*)
 - **Green** (*ambulatory*)
- Components of Assessment
 - *Ambulation*
 - *Respirations*
 - *Perfusion*
 - *Mental status*

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START - Respiratory Status

- Respirations

- None: Open airway

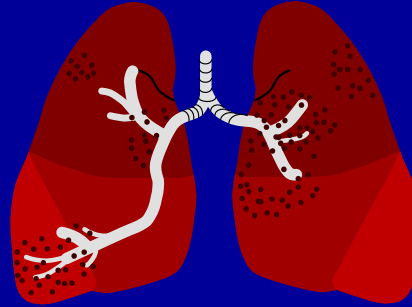
- Still none?- **Deceased**

- Restored?- **Immediate**

- Present?

- >30 bpm- **Immediate**

- < 30 bpm- Move on and assess Perfusion



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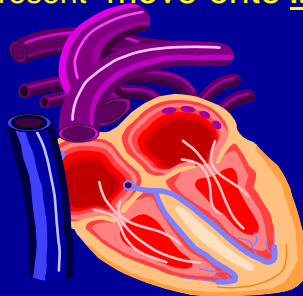
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START- Perfusion

- Perfusion

- Radial pulse absent- **Immediate**

- Radial pulse present- move onto Mental Status



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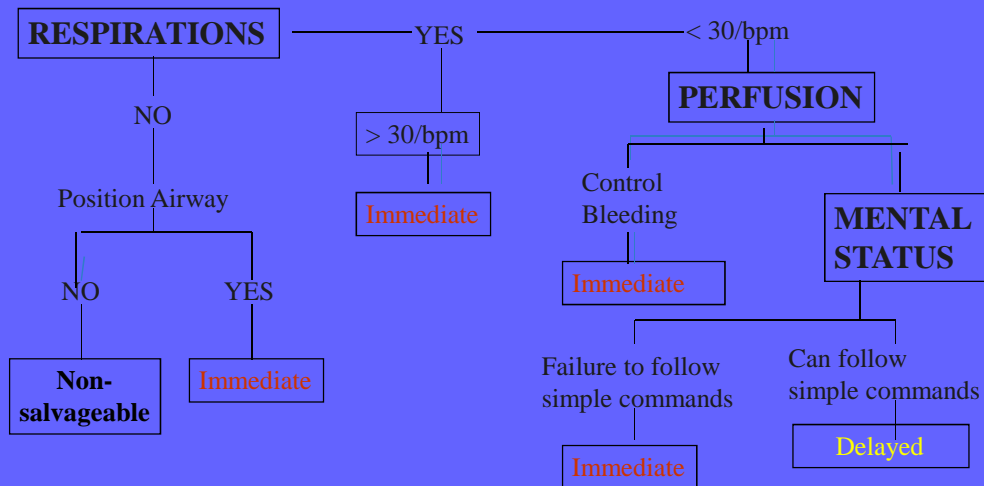
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START- Mental Status

- Mental Status
 - Can NOT follow Simple Commands- **Immediate**
 - Unconscious or altered LOC- **Immediate**
 - CAN follow simple commands- **Delayed**
 - **Normal Mental Status- move onto next person**

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START Triage



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START

- If patient is immediate-priority is upon initial assessment, attempt to correct airway or uncontrolled bleeding only before moving on to next patient.



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START/JumpSTART

- Objectives: Participants will:
 - understand the need for an adult and pediatric multicasualty triage tool
 - define the differences between START and JumpSTART
 - identify components of START & JumpSTART
 - be able to triage pediatric patients according to the JumpSTART criteria and adult patients according to the START criteria

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There are currently no published or widely utilized field multicasualty triage tools that take into account the physiological differences between children and adults.

Pediatric multicasualty triage may be affected by the emotional state of triage officers. There may be a tendency to upgrade children's triage categories out of compassion or lack of confidence in pediatric assessment and intervention skills.

Why develop a pediatric tool?

- To optimize triage effectiveness to the benefit of all victims
- To minimize the emotional component of pediatric triage by providing concrete guidelines that are physiologically sound
- To reduce the emotional impact of having to declare a child to be dead/nonsalvageable

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START:

Potential Problems with Children

- An apneic child is more likely to have a primary respiratory problem than an adult. Perfusion may be maintained for a short time and the child may be salvageable.
- RR +/- 30 may either over-triage or under-triage a child, depending on age.

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START: Potential Problems with Children

- Capillary refill may not adequately reflect peripheral hemodynamic status in a cool environment.
- Obeying commands may not be an appropriate gauge of mental status for younger children.

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JumpSTART Goals

- Modify an existing tool for use with children
- Utilize decision points that are flexible enough to serve children of all ages and reflective of the unique points of pediatric physiology
- Reduce over- and under- triage
- Accomplish triage for most patients within 15 second/pt goal

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JumpSTART: Age

- Ages 1-8 years chosen
- Less than one year of age is less likely to be ambulatory. These children can be triaged using JumpSTART but should be fully screened. If all “ ” criteria are satisfied and there are no significant external injuries, the child may be classified as “ambulatory.”
- The pertinent pediatric physiology (specifically, the airway) approaches that of adults by approximately eight years of age.

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JumpSTART: Ambulatory

Identify and direct all ambulatory patients to designated “Green” area for secondary triage and treatment. Begin assessment of nonambulatory patients as you come to them.

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JumpSTART: Breathing

- If breathing spontaneously, go on to the next step, assessing respiratory rate.
- If apneic or with very irregular breathing, open the airway using standard positioning techniques.
- If positioning results in resumption of spontaneous respirations, tag the patient “**immediate**” and move on.

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The “Jumpstart” Part

- If no breathing after airway opening, check for peripheral pulse. If no pulse, tag the patient “deceased/nonsalvageable” and move on.
- If there is a peripheral pulse, give 15 sec of Mouth to Mask ventilation (about 5 breaths). If apnea persists, tag the patient “deceased/nonsalvageable” and move on.
- If breathing resumes after the “jumpstart,” tag the patient “**immediate**” and move on.

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JumpSTART: Respiratory Rate

- If respiratory rate is 15-40/min (roughly one breath every 2-4 seconds), proceed to assess perfusion.
- If respiratory rate is <15 or >40/min (slower than one breath every 2 seconds) or irregular, tag the patient “**immediate**” and move on.

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JumpSTART: Perfusion

- If peripheral pulse is palpable, proceed to assess mental status.
- If no peripheral pulse is present (in the least injured limb), tag the patient “**immediate**” and move on.

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JumpSTART: Mental Status

- Use AVPU scale to assess mental status.
- If Alert, responsive to verbal, or appropriately responsive to Pain, tag the patient “**minor**” and move on.
- If inappropriately responsive to Pain or Unresponsive, tag the patient “**immediate**” and move on.

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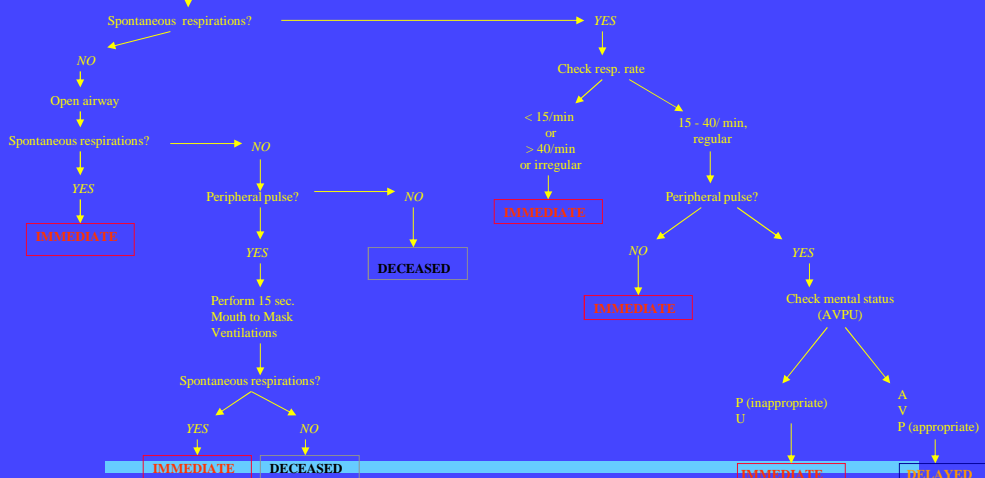
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The JumpSTART Field Pediatric Multicasualty Triage System ©

(Patients aged 1- 8 years)

Identify and direct all ambulatory patients to designated Green area for secondary triage and treatment. Begin assessment of nonambulatory patients as you come to them. Proceed as below:

Black = Deceased/expectant
Red = Immediate
Yellow = Delayed
Green = Minor/Ambulatory



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START/JumpSTART: Similarities

- Same “RPM” approach used.
- As soon as a definitive triage category is determined, further assessment stops.
- Ambulatory patients are immediately moved away for secondary triage.
- To be in the delayed category, patients must have adequate respirations and perfusion and mental status that is unlikely to compromise the airway.

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START/JumpSTART: Differences

- Apneic children are rapidly assessed for sustained circulation.
- Apneic children with circulation receive a brief ventilatory trail as an additional airway opening and stimulation maneuver.
- Respiratory rates are adjusted.
- Peripheral pulse
- AVPU is used to assess mental status.

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Potential Disadvantages of JumpSTART

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Disadvantages

- Extra steps for apneic children add time to the triage process.
- MTM ventilation increases the risk of cross-contamination between patients.
- Additional equipment must be carried by triage personnel.
- “It’s too complicated.”
- There’s no proof it will work.

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Potential Advantages of JumpSTART

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Advantages

- JumpSTART provides a rapid triage system specifically designed for children, taking into consideration their unique physiology.
- The algorithm is modified from an existing system widely accepted for adult triage.
- For most patients, triage can be accomplished within the 15 second goal.

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Advantages

- Objective triage criteria for children will help to eliminate the role of emotions in the triage process.
- Objective triage criteria will provide emotional support for triage personnel forced to make life or death decisions for children in the MCI setting.

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Case Studies

- Patient 1
 - 7 y/o female
 - Non-responsive
 - Respiratory rate 24
 - Peripheral pulses present
- Patient 2
 - 8 y/o male
 - Awake, alert, crying
 - Crushing injury to L-Leg
 - Unable to walk
 - Respiratory rate 32
 - + Peripheral pulses
- Patient 3
 - 5 y/o male
 - Non-responsive
 - No spontaneous respirations
 - Open airway
 - No spontaneous respirations
 - Peripheral pulses present
 - Mouth to Mask Ventilation x 15 sec.
 - No spontaneous respirations

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Case Studies

- Patient 4
 - 6 y/o female
 - Spontaneous respirations present
 - Respiratory rate 20
 - Awake and alert
 - + Peripheral pulses
 - Unable to walk
- Patient 5
 - 8 y/o male
 - Confused- Will follow commands
 - Walking looking for his sister
- Patient 6
 - 3 y/o male
 - Non-responsive
 - No spontaneous respirations
 - Open airway
 - No spontaneous respirations
 - Peripheral pulses present
 - Mouth to Mask Ventilation x 15 sec.
 - Spontaneous respirations present

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Case Studies

- Patient 7
 - 7 y/o female
 - Respiratory rate 48
 - Peripheral pulses present
 - Awake and alert
- Patient 8
 - 8 y/o male
 - Able to walk
 - Cut to forehead
 - Awake and alert
- Patient 9
 - 3 y/o male
 - No spontaneous respirations
 - Open airway
 - No spontaneous respirations
 - No peripheral pulses

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Case Studies

- **Patient 1 (Immediate)**
 - 7 y/o female
 - Spontaneous respirations present
 - Respiratory rate 24 regular
 - Peripheral pulses present
 - Non-responsive to pain

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Case Studies

- **Patient 3 (Deceased)**
 - 5 y/o male
 - **Non-responsive**
 - **No spontaneous respirations**
 - **Open airway**
 - **No spontaneous respirations**
 - **Peripheral pulses present**
 - **Mouth to Mask Ventilation x 15 sec.**
 - **No spontaneous respirations**

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Case Studies

- Patient 5
 - 8 y/o male
 - Confused- Will follow commands
 - Walking looking for his sister

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Case Studies

- Patient 6 (Immediate)
 - 3 y/o male
 - Non-responsive
 - No spontaneous respirations
 - Open airway
 - No spontaneous respirations
 - Peripheral pulses present
 - Mouth to Mask Ventilation x 15 sec.
 - Spontaneous respirations present

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Case Studies

- Patient 7 (Immediate)
 - 7 y/o female
 - Respiratory rate 48
 - Peripheral pulses present
 - Awake and alert

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Case Studies

- Patient 8 (Minor)
 - 8 y/o male
 - Able to walk
 - Cut to forehead
 - Awake and alert

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Case Studies

- **Patient 9 (Deceased)**
 - 3 y/o male
 - No spontaneous respirations
 - Open airway
 - No spontaneous respirations
 - No peripheral pulses

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