TRIAGE FOR THE PUBLIC HEALTH PROFESSIONAL

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Objectives

• The learner will be able to
  – Recite the history of triage
  – State the differences between START and SALT triage system
  – Define the meaning of Red, Yellow, Green, Black, and Gray victims
  – List the medical interventions allowed in START and SALT

THE ROOTS OF TRIAGE

Triage: Refers to the “sorting” of patients
   The French origin for the term “triage” (trier) initially referred to the sorting of agricultural products
1797: Italian Campaign
Designed the Ambulance Volante or ‘flying ambulances’ to evacuate casualties from the battlefield.
- Personnel: Physician, quartermaster, noncommissioned officer, a drummer boy (who carried the bandages), and 24 infantrymen.
- In his 1812 memoir, Larrey explained his then-novel method of immediately treating the most severely wounded first without waiting for the battle to end.

Triage: Those who are dangerously wounded should receive the first attention, without regard to rank or distinction.

Horse-drawn wagons for collecting and carrying the wounded from the battlefield to base hospitals.

The flying ambulances were a success, and this idea was subsequently taken up by other armies. Even in the harsh desert terrain, his flying ambulances would collect the wounded in less than 15 minutes.

British surgeon John Wilson
- 1846
- Proposed that treatment be deferred for both those with minor wounds and those with severe injury, instead offering therapy first to those patients who were most likely to benefit from immediate treatment.
TODAY’S MASS CASUALTY TRIAGE

START

• Simple triage and rapid treatment
  – Red Triage Tag ("Immediate" or T1 or Priority 1): Victims whose lives are in immediate danger and who require immediate treatment;
  – Yellow Triage Tag ("Delayed" or T2 or Priority 2): Victims whose lives are not in immediate danger and who will require urgent, not immediate, medical care;
  – Green Triage Tag ("Minimal" or T3 or Priority 3): Victims with minor injuries who will eventually require treatment;
  – Black Triage Tag ("Expectant" or No Priority): Victims who are either dead or who have such extensive injuries that they can not be saved with the limited resources available.

Combined START/JumpSTART Triage Algorithm
SALT

- Sort, Assess, Lifesaving Interventions, Treatment/Transport
  - Red Triage Tag ("Immediate" or T1 or Priority 1): Victims whose lives are in immediate danger and who require immediate treatment;
  - Yellow Triage Tag ("Delayed" or T2 or Priority 2): Victims whose lives are not in immediate danger and who will require urgent, not immediate, medical care;
  - Green Triage Tag ("Minimal" or T3 or Priority 3): Victims with minor injuries who will eventually require treatment;
  - Black Triage Tag (No Priority): Victims without signs of life;
  - Gray Triage Tag ("Expectant"): Victims still alive but with potentially non-survivable injuries;

Triage: A dynamic process

- Patients need to be reassessed repeatedly, and initial color-coded triage designations can change over time.
START-SALT: Conclusion

- Because of the comprehensive examination of the evidence leading to the recent recommendations of the CDC advisory committee, the SALT triage system seems a promising direction for the future of disaster triage.

A TRIAGE EXERCISE

A Foggy Day

- Turnpike
- 25-vehicle chain reaction
Patient #1
- 43 y/o male, propped up against car
- Pumping femoral artery
- R: 28
- Radial pulse: -
- M: V

Patient #2
- 63 y/o male, prone, unresponsive
- Burns on extremities
- R: 24, noisy, partially obstructed
- Radial pulse: Present
- M: U

Patient #3
- 42 y/o female
- Didn’t walk to safety when instructed
- No bleeding, normal pulses, normal breathing
- R: 20
- P: +
- M: A
Patient #4
- 17 y/o male, lying supine, waving for help
- Breathing well, follows commands; thrown by blast 20’ into wall
- Can’t get up due to back pain and bilateral leg weakness
- R: 26
- P: +
- M: A

1) RED
2) YELLOW
3) GREEN
4) GRAY
4) BLACK

Patient #5
- 26 y/o male
- Contusions on head, bleeding from left ear
- R: 8
- P: +
- M: U

1) RED
2) YELLOW
3) GREEN
4) GRAY
4) BLACK

Patient #6
- 52 y/o female
- Breathes when airway opened; airway maintained manually by husband
- He demands you stay to assist!
- Bleeding heavily from abdominal wound; soaking through dress
- R: 10
- P: -
- M: V

1) RED
2) YELLOW
3) GREEN
4) GRAY
4) BLACK
Patient #7

- 20 year-old male running around
- Torn clothes
- Yelling, "Help, help, help."
- Interfering with ops
- No obvious injuries
- Can't get vitals

Patient #8

- 18 year-old boy
- Complains of severe abdominal pain
- Bruise along lower left chest and LUQ noted
- R: 28
- P: +
- M: A

Patient #9

- Rescuer blows out knee trying to do 20 things at once
- R: 18
- P: +
- M: Cursing a blue streak
Patient #10

- 27 year-old female
- 8 months pregnant
- Obvious open fracture at R ankle
- R: 26
- P: + (- DP at R foot)
- M: A

Patient #11

- 60 year-old brittle diabetic
- Assorted scrapes and bruises
- Can walk
- R: 24
- P: +
- M: A
  - Just took his insulin 1 hour ago
  - Has not eaten

Patient #12

- 50 year-old male with driveshaft embedded in left axilla
- C/O SOB
- R: 36
- P: +
- M: A
Patient #13
• 30 year-old female whimpering
• C/O LUQ pain; bruising noted in LUQ
• R: 24
• P: -
• M: A

1) RED
2) YELLOW
3) GREEN
4) GRAY
4) BLACK

Patient #14
• 23 year-old female
• Partially scalped; right ear detached.
• R: 32
• P: +
• M: A

1) RED
2) YELLOW
3) GREEN
4) GRAY
4) BLACK

Patient #15
• 33 year-old male
• 95% amputation at R elbow
• R: 28
• P: + (left); - (right)
• M: A

1) RED
2) YELLOW
3) GREEN
4) GRAY
4) BLACK
Patient #16

- 43 year-old male, smoking
- No injuries; heavy chest pain
- PMH: 3 MIs in past
- R: 24
- P: +
- M: A

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Remember.....

- Not only have all these systems not been completely validated, but,
  no one knows if they’ll work in CBIRNE incidents

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Resources

- Reminded trial comparing two acute casualty triage systems. (JumpSTART versus SAT) is a pediatric simulation case.
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