The University of Kansas Health System

EMS Guidelines Time-Critical Diagnosis

Trauma
ACS-verified Level I Trauma Center

Airway/Breathing
- Stabilize c-spine during assessment
- Open airway using modified jaw thrust, if indicated

***Maintain SpO2 >94%**

Circulation
- Prioritize hemorrhage control if active bleeding; Control external bleeding by direct pressure or tourniquet
- Vital signs: Report any SBP <90 even if transient (determines KU activation level)
- Maintain warmth: external and internal
- Apply c-spine immobilization. Full spine management per local protocol – may defer LSB.

IV fluid support: Hypotensive
- Large-bore IV sites (x2) or (x1) IO in humerus preferred, if possible
- Initiate LR/NS at:
  - 500 ml/hr adults
  - 20 ml/kg pediatrics

Don't delay transport for endotracheal intubation.

At the Trauma Bay

Immediately on arrival
For traumatic cardiac arrest, report total time down and minutes of CPR to the trauma team leader.

Verbal EMS report
Communicate any emergent information to the trauma team leader (TTL) on arrival. You may be asked to hold full report until airway and external hemorrhage is controlled. Afterward, you will receive our full attention. The entire trauma team needs to hear your report. MIST (Mechanism, Injuries, Symptoms, Treatment) format is preferred for report. If TXA has been given, notify the time of injury and time of TXA administration.

ST Elevation MI
Accredited STEMI Receiving Center

EMS with 12-lead ECG
Symptoms consistent with ACS include chest pain, abdominal pain, back pain, upper extremity pain, dyspnea, diaphoresis, N/V, weakness and fatigue.
- Patients with these symptoms should have a 12-lead ECG performed and interpreted within 10 minutes of patient contact.
- If EKG reveals STEMI, elevation ≥ 1mm in 2 contiguous leads, immediately notify STEMI receiving center that requires the shortest transport time or a STEMI referral center per your predetermined protocols. Transmit report en route using clear communication that a STEMI patient has been identified.
- Transmit ECG if capable or hand hard copy of 12-lead to ED staff.

EMS without 12-lead ECG
Emergently transport to the closest appropriate hospital.

Intervention en route
- Continuous cardiac monitor
- Place defib pads
- O2 – maintain SpO2 >94%
- ASA – 4 baby – chew if alert
- Nitro SL q. 5 minutes x3 PRN
  - Use cautiously with elevations in II, III and AVF.
  - Do not give if patient is on phosphodiesterase inhibitors (Viagra, Cialis, etc.).
- 2 large bore IVs, NS-TKO
- Morphine for pain PRN

Stroke
Advanced Comprehensive Stroke Center

Cincinnati Prehospital Stroke Scale

Facial droop
- Normal: Both sides of face move equally
- Abnormal: One side of face does not move

Arm drift
- Normal: Both arms move equally
- Abnormal: One arm drifts compared to the other

Speech
- Normal: Correct words with no slurring
- Abnormal: Slurred or inappropriate words or mute

Field Intervention
- Heart monitor
- IV of NS during transport
- Blood glucose evaluation, treat if signs and symptoms of hypoglycemia per local protocol

*O2 – maintain SpO2 >94%

SAMPLE History
S – Signs and symptoms
A – Allergies
M – Medications
P – Past medical history
L – Last oral intake
E – Events leading up to incident, including **last known time patient was well**

Glasgow Coma Scale

Eye-opening response

Score	Pediatric GCS <1 year	Adult GCS >1 year
4	Spontaneous	Spontaneous
3	To shout	To verbal command
2	To pain	To pain
1	None	None

Motor response

Score	<1 year	>1 year
6	Displays spontaneous response	Obeys commands
5	Localizes pain	Localizes pain
4	Withdraws from pain	Withdraws from pain
3	Displays abnormal flexion to pain (decorticate rigidity)	Displays abnormal flexion to pain (decorticate rigidity)
2	Displays abnormal extension to pain (decerebrate rigidity)	Displays abnormal extension to pain (decerebrate rigidity)
1	None	None

Verbal response

Score	0-23 months
5	Babbles, coos appropriately
4	Cries, but is consolable
3	Cries or screams persistently to pain
2	Grunts or moans to pain
1	None

Score	2-5 years
5	Uses appropriate words and phrases
4	Uses inappropriate words
3	Cries or screams persistently to pain
2	Grunts or moans to pain
1	None

Score	>5 years
5	Is oriented and converses
4	Conversation is confused
3	Words are inappropriate
2	Sounds are incomprehensible
1	None

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EMS Guidelines Time-Critical Diagnosis

Burns
ABA-Verified Adult and Pediatric Burn Center

Airway
Evidence of injury
Hoarse/raspy voice
Singed nasal hair
Soot in pharynx

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Yes: Intubate ASAP
No: Oxygen 100%

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Elevate HOBed 30°
(unless contraindicated)

IV fluid support
Establish rule of 9s
(for 2nd and 3rd degree burns only)
Initiate IVFs if >15% adults,
10% pediatrics

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Pre-hospital fluid management
Age < 5 years: 125ml LR/hr
Age 6-13 years: 250 ml LR/hr
Age > 14 years: 500 ml LR/hr

Caution: Start IV fluid at 250 ml/hr for patients with pre-existing cardiac disease, pulmonary disease or age >70

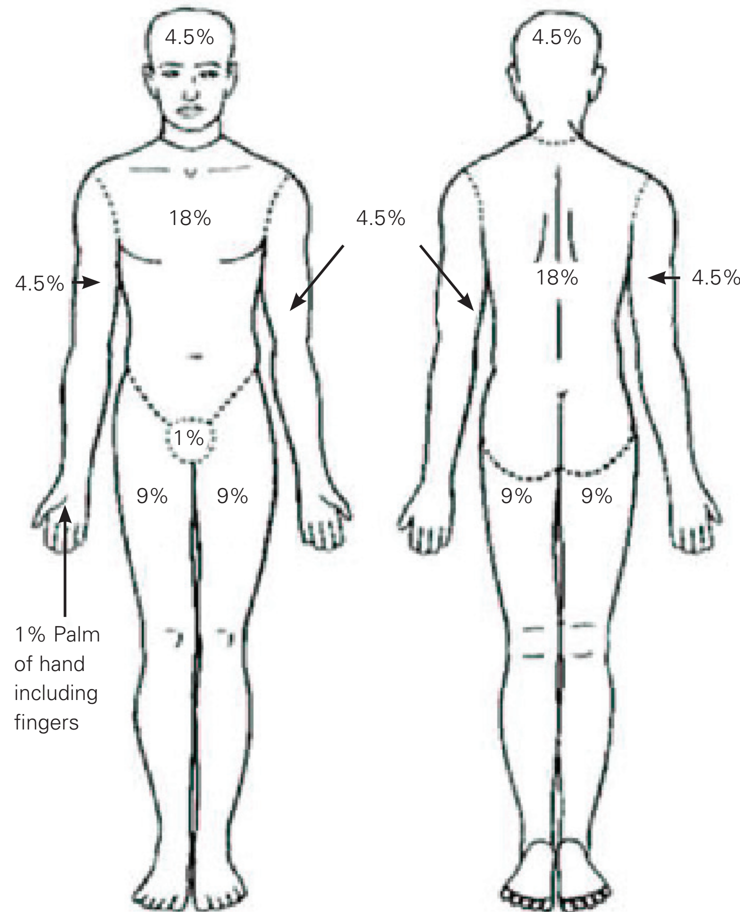
Avoid fluid challenge unless patient is hypotensive due to trauma

Analgesia support: IV meds only

Adult	Pediatrics
Fentanyl	**Fentanyl**
50 mcg over 1-2 minutes	1 mcg/kg, q. 3-5 minutes
Slowly: Diluted IV titrated to desired effect	**Slowly:** Diluted IV titrated to desired effect
or	or
Morphine	**Morphine**
2 mg, q. 3 minutes	0.1 mg/kg q. 5 minutes
Slowly: Titrate IV increments to desired effect	**Slowly:** Titrate IV increments to desired effect

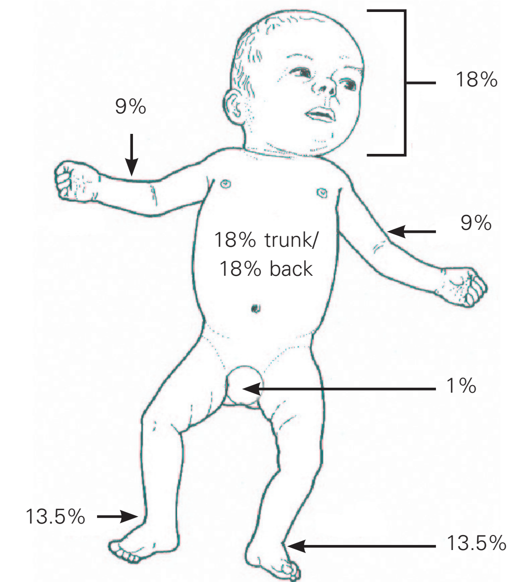
Burn Size Assessment
(Include partial- and full-thickness burns only.)

Adult



How to estimate scattered burns:
The size of the patient's hand (palm with fingers closed) represents 1% of his or her total burn surface area.

Pediatric



Keep patient warm – cover with clean dry sheets.
Avoid use of ice or ointments.

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