Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

Table of Contents

HSHS St. John's SAMIC EMS

ADULT MEDICAL 1115

Acute Pain Management

EMR	• Perform **Routine Patient Care Protocol 1105.**
EMT	• Continue EMR care. • For nausea / vomiting, refer to **Nausea/Vomiting Protocol 1135.** • Initiate ALS intercept if indicated. • Transport as soon as possible. • Contact receiving facility as soon as possible.

I	• Continue EMT care.
	• For mild to moderate pain:
	  • Administer **Ketorolac**.
	  • ≤65 years old and/or ≥ 50 kg – **30 mg IV/IM.**
	  • ≥66 years old and/or ≤49 kg – **15 mg IV or 30 mg IM.**
	• For cases with isolated extremity fracture, chest pain, burns, or discomfort from IO infusion the following may be given:
	  • **Fentanyl**.
	  • **50 mcg IV/IM/IN,** reduce dose by 50% for patients with renal impairment. May repeat in 5 minutes.
	• Initiate ALS intercept if indicated.
	• Transport as soon as possible.
	• Contact receiving facility as soon as possible.

P	• Continue ILS care.
	• For cases with isolated extremity fracture, chest pain, burns, or discomfort from IO infusion the following may be given:
	  • **Morphine**; or,
	  • **2-5 mg IV** every 5 minutes or **2-5 mg IM** every 15 minutes.
	  • **Fentanyl**.
	  • **50 mcg IV/IM/IN,** reduce dose by 50% for patients with renal impairment. May repeat in 5 minutes to total dose of 100 mcg.
	• All other cases require consult with **Medical Control.**
	• If pain is not relieved via **Morphine** and **Fentanyl**, consult with **Medical Control** for orders for **Ketamine**
	  • **0.3mg/kg IV over 10 minutes as a drip or 2 mg/kg IM.**
	• Transport as soon as possible.
	• Contact receiving facility as soon as possible.

Critical Thinking Elements

- Monitor the patient for respiratory depression when administering narcotics.
- Blood pressure should be monitored closely – check 5 minutes after narcotic administration and prior to administering repeat doses.
- Patients with a head injury, altered level of consciousness, or unstable vital signs should not receive pain medication.
- Patient's receiving pain medications should be monitored continuously via $ETCO_2$, ECG, and SpO_2.
- Patients should also be receiving supplemental oxygen regardless of SpO_2.
- Prophylactic antiemetic should be administered.
- In adults pretreatment of **Midazolam 0.03 mg/kg**, may be beneficial to reduce risk of recovery agitation after ketamine administration.

HSHS St. John's SAMIC EMS

ADULT CARDIAC 2145

Unstable Bradycardia

EMR	• Perform **Routine Cardiac Care Protocol 2105.**
EMT	• Continue EMR care. • Obtain and transmit 12 lead ECG if possible. • Initiate ALS intercept if indicated. • Transport as soon as possible. • Contact receiving facility as soon as possible.

I	• Continue EMT care.
	• Establish IV/IO and administer 500 mL fluid bolus.
	• Administer **Atropine**
	  • **0.5 mg IV/IO Medical Control Order Required.** May repeat every 5 minutes with **Medical Control Order to a max dose of 3 mg.**
	• Begin transcutaneous pacing if the patient is in a 3rd degree AV block or 2nd degree type II block.
	  • Rate should be 70 bpm.
	  • Start current low and increase until mechanical and electrical capture is obtained.
	• Consider sedation
	  • **Versed 2 mg IV**, if time permits
	• Initiate ALS intercept if indicated.
	• Transport as soon as possible.
	• Contact receiving facility as soon as possible.

P	• Continue ILS care.
	• Begin transcutaneous pacing if the patient is in a 3rd degree AV block or 2nd degree type II block.
	  • Rate should be 70 bpm.
	  • Start current low and increase until mechanical and electrical capture is obtained.
	• Consider sedation
	  • **Ketamine 4 mg/kg IM or 2 mg/kg IV.**
	• Administer **Dopamine**
	  • **2-20 mcg/kg/min**.
	• Transport as soon as possible.
	• Contact the receiving hospital as soon as possible.

Unstable Bradycardia

Critical Thinking Elements

- Bradycardia does not necessarily mean that a patient is unstable or requires interventions.
- Patients are considered stable if they are asymptomatic (i.e. alert, oriented, normal skin, and SBP > 100 mmHg).
- The patient is unstable if he/she presents with:
  - Altered level of consciousness
  - Diaphoresis
  - Dizziness
  - Chest pain or discomfort
  - Ventricular ectopy
  - Hypotension (SBP < 100 mmHg)

- Treat underlying etiologies according to appropriate protocol.
- Atropine is contraindicated in patients with normal or elevated blood pressure.
- Consider other factors when assessing bradycardic patients such as:
  - Health and physical condition (Athlete)
  - Current medications (Beta blockers)
  - Head trauma or injury (Cushing's triad)

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ADULT CARDIAC 2155

Narrow Complex Tachycardia (>150 BPM) – Unstable

E M R	• Perform **Routine Cardiac Care Protocol 2105.**

E M T	• Continue EMR care. • Apply 12 lead ECG. Obtain a 12 lead ECG and transmit, if available. • Initiate ALS intercept if indicated. • Transport as soon as possible. • Contact receiving facility as soon as possible.

I	• Continue EMT care.
	• Establish IV access.
	• Administer 500 cc IV fluid bolus.
	• Consider sedation
	  • **Versed 2 mg IV** if time permits
	• **Synchronize Cardioversion** – Apply defibrillator pads and limb leads. Ensure synchronize mode is selected.
	  • For narrow and regular rhythm, administer 50 – 100 J.
	  • For narrow and irregular rhythm, administer 100 – 120 J.
	• Initiate ALS intercept if indicated.
	• Transport as soon as possible.
	• Contact receiving facility as soon as possible.

P	• Continue ILS care.
	• Consider sedation
	  • **Ketamine 4 mg/kg IM or 2 mg/kg IV.**
	• **Synchronize Cardioversion** – Apply defibrillator pads and limb leads. Ensure synchronize mode is selected.
	  • For narrow and regular rhythm, administer 50 – 100 J.
	  • For narrow and irregular rhythm, administer 100 – 120 J.
	• Transport as soon as possible.
	• Contact receiving facility as soon as possible.

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ADULT CARDIAC 2165

Wide Complex Tachycardia (QRS ≥ 0.12)- Unstable

EMR	• Perform **Routine Cardiac Care Protocol 2105.**

EMT	• Continue EMR care. • Apply cardiac monitor and obtain 12-lead ECG and transmit to receiving facility, if equipped. • Initiate ALS intercept if indicated. • Transport as soon as possible. • Contact receiving facility as soon as possible.

I	• Continue EMT care. • Place defibrillation patches. • Perform 12-lead ECG and transmit to receiving facility. • Initiate IV/IO normal saline or lactated ringer TKO or saline lock. • Consider sedation • **Versed 2 mg IV**, if time permits; • If wide complex and regular, perform synchronized cardioversion at 100J. • If wide complex and irregular, defibrillate. • Initiate ALS intercept if indicated. • Transport as soon as possible. • Contact receiving facility as soon as possible.

P	• Continue ILS care. • Consider sedation • **Ketamine 4 mg/kg IM or 2 mg/kg IV.** • Transport as soon as possible. • Contact receiving facility as soon as possible.

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ADULT CARDIAC 2170

Implanted Cardiac Defibrillator

EMR	• Perform **Routine Cardiac Care Protocol 2105.**
EMT	• Continue EMR care. • Apply cardiac monitor and obtain 12-lead ECG and transmit to receiving facility, if equipped. • Initiate ALS intercept if indicated. • Transport as soon as possible. • Contact receiving facility as soon as possible.
I	• Continue EMT care. • Treat arrhythmias according to appropriate protocol. • Initiate ALS intercept if indicated. • Consider sedation • **Versed 2 mg IV**, if time permits • Transport as soon as possible. • Contact receiving facility as soon as possible.
P	• Continue ILS care. • Initiate ALS intercept if indicated. • Consider sedation • **Ketamine 4 mg/kg IM or 2 mg/kg IV.** • Transport as soon as possible. • Contact receiving facility as soon as possible.

HSHS St. John's SAMIC EMS

ADULT RESPIRATORY 3110

Asthma/COPD

EMR	• Perform protocol **Routine Patient Care 1105**. • Administer **Albuterol** if patient's lung sounds are diminished or wheezing. May repeat every 20 minutes as needed. • **2.5mg/3mL**

EMT	• Continue EMR care.
	  • Administer **Albuterol 2.5 mg/3 mL** mixed with **Ipratropium 0.5 mg/3 mL**. Repeat as necessary every 20 minutes.
	• If the patient is suffering from status asthmaticus and does not improve with albuterol, administer **Epinephrine 1 mg/mL 0.3 mg IM.**
	  • If the patient is >40 years old, has an irregular heart rate, has a heart rate > 150 bpm, history of heart disease, or has hypertension; consult **MEDICAL CONTROL**.
	• For moderate to severe respiratory distress initiate CPAP; adjust PEEP to 5-10 cmH_2O. If SBP is < 90 mmHg adjust to PEEP of 5 and discontinue if hypotension persists.
	• Initiate ALS intercept if indicated.
	• Transport as soon as possible.
	• Contact receiving facility as soon as possible.

I	• Continue EMT care. • Continue airway management and perform advanced airway procedures, if indicated. • Initiate ALS intercept if indicated. • Transport as soon as possible. • Contact receiving facility as soon as possible.

P	• Continue ILS care.
	• Administer **Midazolam 1-2 mg slow IV or IM** for anxious patients unable to tolerate CPAP.
	• Administer **Methylprednisolone**
	  • **125 mg IV**.
	  • If patient is still deteriorating, contact **Medical Control** for consideration of **Ketamine.**
	• Transport as soon as possible.
	• Contact receiving facility as soon as possible.

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ADULT RESPIRATORY 3115

CHF/Pulmonary Edema

EMR	• Perform protocol **Routine Patient Care 1105**.
EMT	• Continue EMR care. • Administer **Nitroglycerin** • **0.4mg SL**. May repeat every 3-5 minutes to a max dose of 3 tablets. Ensure SBP > 100 mmHg prior to administration. • For moderate to severe respiratory distress initiate CPAP; adjust PEEP to 5-10 cmH_2O. If SBP is < 90 mmHg adjust to PEEP of 5 and discontinue if hypotension persists. • Be prepared to support ventilations with BVM. • Initiate ALS intercept if indicated. • Transport as soon as possible. • Contact receiving facility as soon as possible.
I	• Continue EMT care. • Administer **Furosemide** • **40 mg IV** or **double daily patient dose**, Max dose 80 mg. • Continue airway management and perform advanced airway procedures, if indicated. • Initiate ALS intercept if indicated. • Transport as soon as possible. • Contact receiving facility as soon as possible.
P	• Continue ILS care. • Administer **Midazolam 1-2 mg slow IV or IM** for anxious patients unable to tolerate CPAP. • Transport as soon as possible. • Contact receiving facility as soon as possible.

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ADULT ABERRANT 5110

Behavioral Emergency/Chemical Restraint

EMR	• Perform **Routine Patient Care Protocol 1105**. • Maintain control of the scene and request law enforcement if needed.
EMT	• Continue EMR care. • Determine if patient is a threat to self or others. • Contact **Medical Control** as early as possible if restraints are needed. • Initiate ALS intercept, if indicated. • Transport as soon as possible. • Contact receiving facility as soon as possible.
I	• Continue EMT care. • Initiate ALS intercept, if indicated. • Administer **Midazolam** for sedation if patient is agitated and needs to be restrained. • **5 mg IM** • Initiate ALS intercept, if indicated. • Transport as soon as possible. • Contact receiving facility as soon as possible.
P	• Continue ILS care. • Administer **Ketamine** for sedation if patient is agitated and patient needs to be restrained. • **2 mg/kg IM.** • Transport as soon as possible. • Contact receiving facility as soon as possible.

ADULT ABERRANT 5110

Behavioral Emergency/Chemical Restraint

Critical Thinking Elements

- Document patient's behavior, statements, actions, and surroundings.
- Attempt to verbally calm and reorient the patient.
- If restraints are used, thoroughly document the reasons for applying restraints, method of restraint, and any law enforcement involvement. Also, be sure to note time medical control was contacted.
- Patient and restraints should be checked every 15 minutes and checks must be documented.

HSHS St. John's SAMIC EMS

PROCEDURE 9005B

i-gel O_2™ Supraglottic Airway

Level of Care	EMR	EMT	ILS	ALS
Approved		Adult/Pedi	Adult/Pedi	Adult/Pedi

Indications:

- Apneic patient when endotracheal intubation is not possible or not available.
- Patient must be unconscious, without a gag reflex.
- Failed Airway
- No history of esophageal foreign body, disease, or caustic ingestion.

	Pediatric				Adult		
Size	1	1.5	2	2.5	3	4	5
Color	Pink	Light Blue	Grey	White	Yellow	Green	Orange
Patient Type	Neonate	Infant	Small Pediatric	Large Pediatric	Small Adult	Medium Adult	Large Adult
Patient Criteria	2 – 5 kg	5 – 12 kg	10 – 25 kg	25-35 kg	30 – 60 kg	50 – 90 kg	90+ kg
Suction Catheter	N/A	10 Fr	12 Fr	12 Fr	12 Fr	12 Fr	14 Fr

Contraindications:

- Responsive patients with an intact gag reflex.
- Patients with known esophageal disease.
- Patients who have ingested caustic substances.

This airway device is not proved to protect the airway from the effects of regurgitation and aspiration. The risk of regurgitation and aspiration must be weighed against the potential benefit of establishing an airway.

1. Using the information provided, choose the correct size, based on patient weight.
2. Open the i-gel package and take out the protective cradle containing the device. Remove the accessory pack containing the sachet of lubricant and airway support strap from the protective cradle and place to side.
3. Remove the i-gel and transfer it to the palm of the same hand that is holding the protective cradle, supporting the device between the thumb and index finger.

4. Open the sachet of lubricant and place a small bolus onto the middle of the smooth surface of the cradle in preparation for lubrication. Do not use silicone based lubricants.
5. Grasp the i-gel with the free hand along the integral bite block and lubricate the back, sides, and front of the cuff with a thin layer of lubricant.
6. Inspect the device carefully; confirm there are no foreign bodies or a bolus of lubricant obstructing the distal opening. Place the i-gel back into the cradle in preparation for insertion.
7. Remove the i-gel from the cradle. Grasp the lubricated i-gel firmly along the integral bite block. Position the device so that the i-gel cuff outlet is facing towards the chin of the patient. The patient should be in the sniffing position with the head extended and neck flexed. The chink should be gently pressed down before proceeding introducing the leading soft time into the mouth of the patient in a direction towards the hard palate.
8. Glide the device downwards and backwards along the hard palate with a continuous but gentle push until a definitive resistance is felt. The tip of the airway should be located into the upper esophageal opening and the cuff should be located against the laryngeal framework. The incisors should be resting on the integral bite block.
9. Utilize the airway support strap or tape the i-gel in place maxilla to maxilla.

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PROCEDURE 9024

Medication Assisted Intubation

Level of Care	EMR	EMT	ILS	ALS
Approved				X

Indication:

- Actual or potential airway impairment or aspiration risk,
- Actual/impending ventilatory failure (HF, Pulmonary edema, COPD, asthma, anaphylaxis, shallow or labored effort),
- Increased work in breathing resulting in severe fatigue,
- GCS 8 or less,
- Inability to ventilate/oxygenate adequately after inserting OPA/NPA and/or via BVM
- Need for increased inspiratory or positive end expiratory pressures to maintain gas exchange,
- Need for sedation to control respirations

Procedure

- Make sure all equipment is prepared and medication is ready.
- Preoxygenate with 100% O2 with a BVM or non-rebreather mask. Preoxygenation is more successful if the head is elevated at least 20°.
- Administer **Ketamine**
  - **2 mg/kg IV/IO**. Repeat **1 mg/kg IV/IO** every 5-10 minutes to keep sedation.
- Administer **Fentanyl.**
  - **100 mcg IV/IO.**
- Consider **Zofran** for nausea.
- Intubate the patient, making sure you visualize the tube passing the vocal cords.
- Assess for correct placement; bilateral breath sounds, ETCO2 reading of at least 35 mmHg and chest rise and fall.
- Secure ETT.
- Continue to reassess and monitor patient.

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PROCEDURE 9027

Pediatric AED

Level of Care	EMR	EMT	ILS	ALS
Approved	X	X	X	X

Ideally utilization of an AED with pediatric capabilities is preferred. However, if one is not available; use of any AED is appropriate.

Apply pediatric pads according to manufacture instructions. When using adult pads, apply pads to the child's chest and back.

1. Confirm pulseless and apnea.
2. Perform CPR
3. Apply AED as indicated.
4. Follow prompts on AED.

HSHS St. John's SAMIC EMS

PROCEDURE 9028

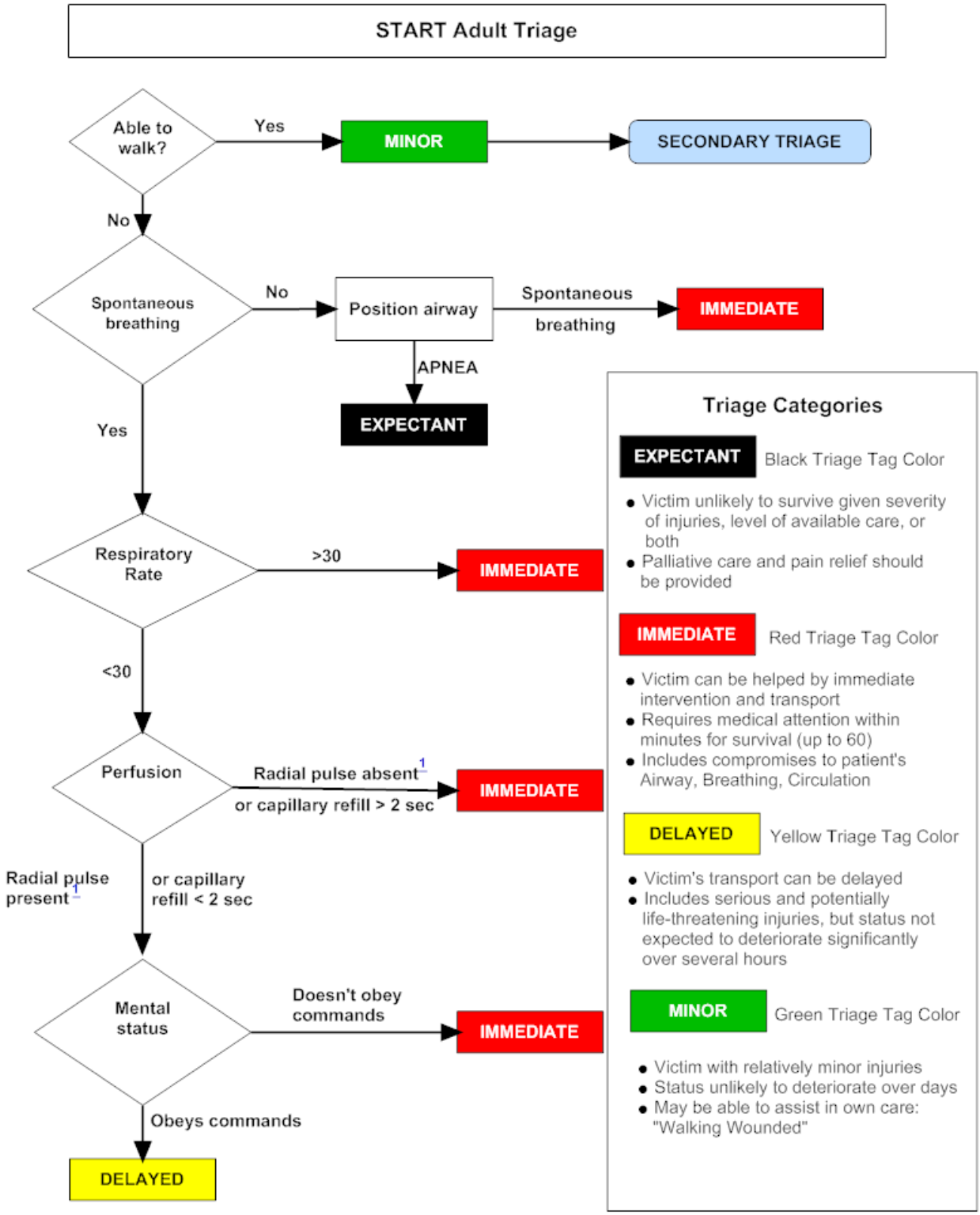
Field Triage

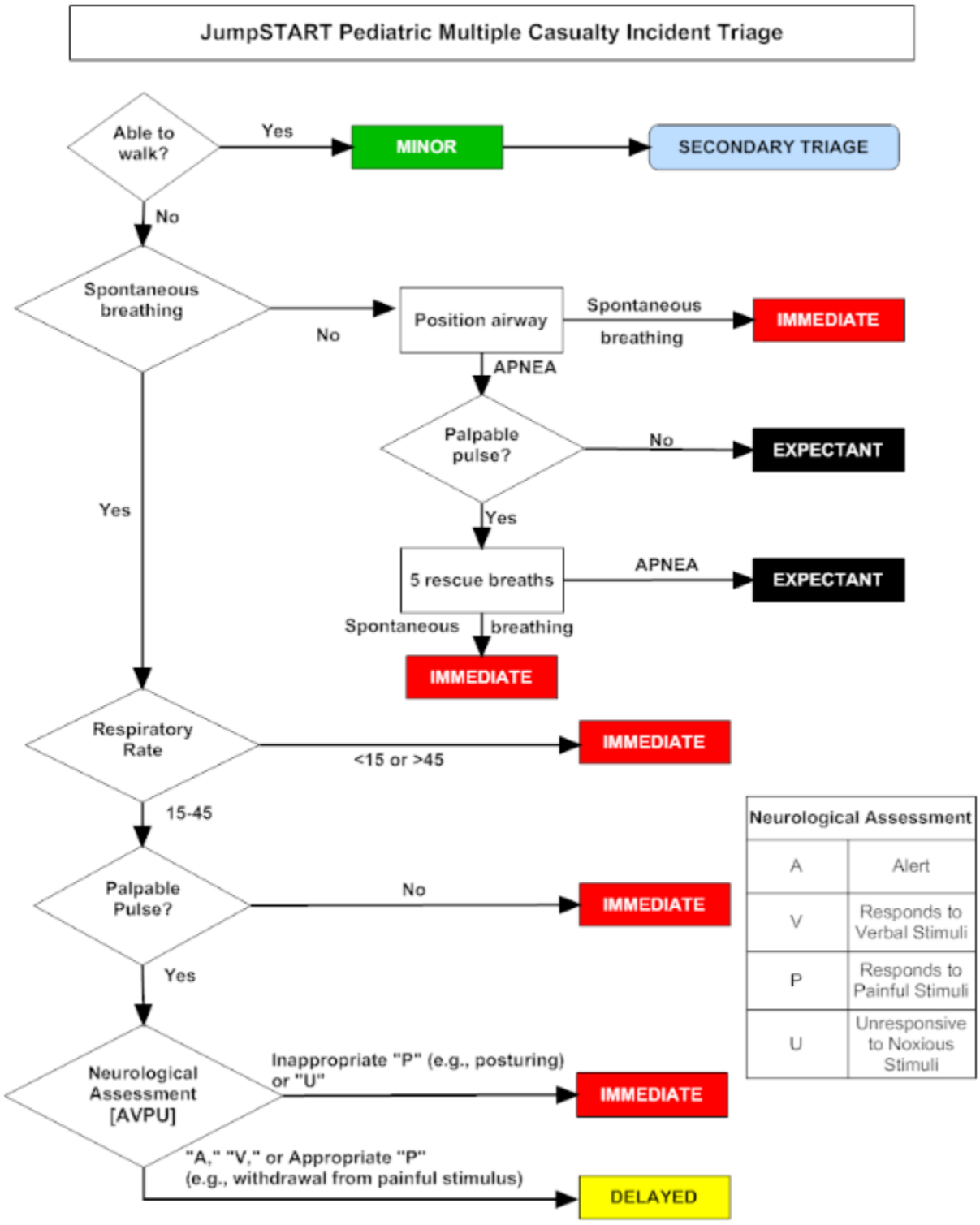
Level of Care	EMR	EMT	ILS	ALS
Approved	X	X	X	X

Field triage is indicated at any incident where resources are stressed. No more than 60 seconds should be spent with each patient. Opening of airways, clearing airways, and bleeding control are the only interventions to be performed during triage. Triage should be a continuous process and once all patients are triaged, the process should continue.

1. Ensure scene safety.
2. Size up scene and request additional resources as needed and ensure notification to dispatch.
3. Designate staging area and triage/treatment area.
4. All incoming units must report to the staging area and await further orders.

Begin START and JumpSTART Triage Algorithm


START Adult Triage
Able to walk?
Yes
MINOR
SECONDARY TRIAGE
No
Spontaneous breathing
No
Position airway
Spontaneous breathing
IMMEDIATE
APNEA
EXPECTANT
Yes
Respiratory Rate
>30
IMMEDIATE
<30
Perfusion
Radial pulse absent[1]
or capillary refill > 2 sec
IMMEDIATE
Radial pulse present[1]
or capillary refill < 2 sec
Mental status
Doesn't obey commands
IMMEDIATE
Obeys commands
DELAYED
Triage Categories
EXPECTANT
Black Triage Tag Color
Victim unlikely to survive given severity of injuries, level of available care, or both
Palliative care and pain relief should be provided
IMMEDIATE
Red Triage Tag Color
Victim can be helped by immediate intervention and transport
Requires medical attention within minutes for survival (up to 60)
Includes compromises to patient's Airway, Breathing, Circulation
DELAYED
Yellow Triage Tag Color
Victim's transport can be delayed
Includes serious and potentially life-threatening injuries, but status not expected to deteriorate significantly over several hours
MINOR
Green Triage Tag Color
Victim with relatively minor injuries
Status unlikely to deteriorate over days
May be able to assist in own care: "Walking Wounded"


JumpSTART Pediatric Multiple Casualty Incident Triage
Able to walk?
Yes
MINOR
SECONDARY TRIAGE
No
Spontaneous breathing
No
Position airway
Spontaneous breathing
IMMEDIATE
APNEA
Palpable pulse?
No
EXPECTANT
Yes
Yes
5 rescue breaths
APNEA
EXPECTANT
Spontaneous breathing
IMMEDIATE
Respiratory Rate
<15 or >45
IMMEDIATE
15-45
Palpable Pulse?
No
IMMEDIATE
Yes
Neurological Assessment [AVPU]
Inappropriate "P" (e.g., posturing) or "U"
IMMEDIATE
"A," "V," or Appropriate "P" (e.g., withdrawal from painful stimulus)
DELAYED
Neurological Assessment
A
Alert
V
Responds to Verbal Stimuli
P
Responds to Painful Stimuli
U
Unresponsive to Noxious Stimuli

Use JumpSTART if the Patient appears to be a child.

Use an adult system, such as START, if the patient appears to be a young adult.

Triage Categories

EXPECTANT Black Triage Tag Color

- Victim unlikely to survive given severity of injuries, level of available care, or both
- Palliative care and pain relief should be provided

DELAYED Yellow Triage Tag Color

- Victim's transport can be delayed
- Includes serious and potentially life-threatening injuries, but status not expected to deteriorate significantly over several hours

IMMEDIATE Red Triage Tag Color

- Victim can be helped by immediate intervention and transport
- Requires medical attention within minutes for survival (up to 60)
- Includes compromises to patient's Airway, Breathing, Circulation

MINOR Green Triage Tag Color

- Victim with relatively minor injuries
- Status unlikely to deteriorate over days
- May be able to assist in own care: "Walking Wounded"

HSHS St. John's SAMIC EMS

Drug Profile 9523

Ketamine

Level of Care	EMR	EMT	ILS	ALS
Approved				X

Alternate Name:
- Ketalar

Class:
- General Anesthetic

Indication:
- Acute pain uncontrolled by narcotics
- Sedation for procedure or restraints
- Asthma exacerbation with decline in condition
- Medication assisted intubation

Contraindication:
- Hypersensitivity
- Known or suspected schizophrenia
- Infants < 3 months of age

Supplied:
- 500 mg/10 mL

Dose:
- Sedation
  - IM 4 mg/kg
  - IV 2 mg/kg
- Pain
  - IM 2 mg/kg
  - IV 0.3 mg/kg over 10 minutes as a drip
- Medication Assisted Intubation
  - IV 2 mg/kg
- Agitation
  - IM 2mg/kg