University Hospitals
EMS Training & Disaster Preparedness Institute

Emergency Medical Responder Treatment Guidelines

2019

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INTRODUCTION

MEDICAL CONTROL PROTOCOLS AND PROCEDURES GUIDELINES

These protocols and procedures are to be used as Emergency Medical Responder guidelines for operation during the medical and or trauma care of a person that require medical direction. They are also intended to be guidelines to ensure that personnel are trained in proper pre-hospital patient care.

Procedures are not considered rigid rules, but rather established standards against which Emergency Medical Responder care practice can be measured.

Treatment protocols are specific orders directing the actions pertaining to techniques and/or medications used by Emergency Medical Responder personnel who are required to practice under direct supervision of a physician and under their respective EMS Medical Control authority.

Treatment protocols may and should be initiated without prior direct Medical Control contact, especially when the patient's condition and/or situation is life threatening. As soon as the condition and/or situation permits, the patient should be transported to the emergency department via company policy or local 911 emergency service.

These protocols assume that the Emergency Medical Responder has a thorough working knowledge and current completion card in Basic Life Support (BLS) by the American Heart Association or American Red Cross. Accordingly, BLS procedures are not discussed at length in these protocols.

The Protocols may be used as an educational device before, during and after a run, as a general education tool for squads and responders.

Although not identical, these protocols and procedures are derived from the State of Ohio EMS guidelines. Please note that items in this manual are subject to continuous review for the sake of providing members with the most current emergency medical information. Updates to this material may be frequent to maintain a current standard of care to benefit both the patient and the provider of emergency medical care. The cover page of this manual indicates when the most current version was printed. Please replace older versions with newly updated material as soon as it is issued. Once updated, older versions are to be considered obsolete and are to be discarded to help eliminate confusion.

INTRODUCTION

MEDICAL CONTROL GENERAL GUIDELINES

1. The patient history should not be obtained at the expense of the patient. Life-threatening problems detected during the primary assessment ***must*** be treated first.

2. Cardiac arrest due to trauma is not treated by medical cardiac arrest protocols. Trauma patients should be transported promptly with CPR, control of hemorrhage, cervical spine immobilization, and other indicated procedures attempted en route.

3. When transferring lower level pre-hospital care to a higher level of prehospital care, a thorough consult should be performed between caregivers describing initial patient presentation and care rendered to the point of transfer.

4. If the patient's condition does not seem to fit a protocol or protocols, contact Medical Control for guidance.

5. All trauma patients with a mechanism or history for multiple system trauma should be transported as soon as possible. The scene time should be 10 minutes or less.

6. Medical patients will be transported in the most efficient manner possible considering the medical condition. Justification for scene times greater than 20 minutes should be documented.

7. The state of Ohio, Division of EMS, specifies minimum Emergency Medical Responder equipment. The Medical Director may also make specific recommendations for equipment choices.

8. These protocols are the written Medical Direction and Standing Orders of the Medical Director and authorize the activities of the Emergency Medical Responder until such time as these Standing Orders are overridden / supplemented by:

    a. Radio / telephone contact with the Emergency Department for direct "on-line" medical direction / orders.
    b. The arrival on the scene of a person with a higher level of EMS certification. This person must provide proof and state / accept responsibility for the care delivered to that patient.
    c. The arrival of local EMS to take over care and transport of the patient.

9. Vital signs should be obtained and recorded every 5 minutes for unstable or critical patients, if possible

INTRODUCTION

PHYSICIAN INTERVENER GUIDELINES

1. When a non-medical-control physician offers assistance to EMS or the patient is being attended by a physician with whom they do not have an ongoing patient relationship, EMS personnel must contact On-line Medical Control and the physician must be approved by On-line Medical Control.

2. When the patient is being attended by a physician with whom they have an ongoing patient relationship, EMS personnel may follow orders given by the physician if the orders conform to current EMS guidelines, and if the physician signs the PCR. Notify Medical Control at the earliest opportunity. Any deviation from local EMS protocols requires the physician to accompany the patient to the hospital.

3. EMS personnel may accept orders from the patient's physician over the phone with the approval of Medical Control. The paramedic should obtain the specific order and the physician's phone number for relay to Medical Control so that Medical Control can discuss any concerns with the physician directly.

INTRODUCTION

MEDICAL CONTROL GENERAL GUIDELINES

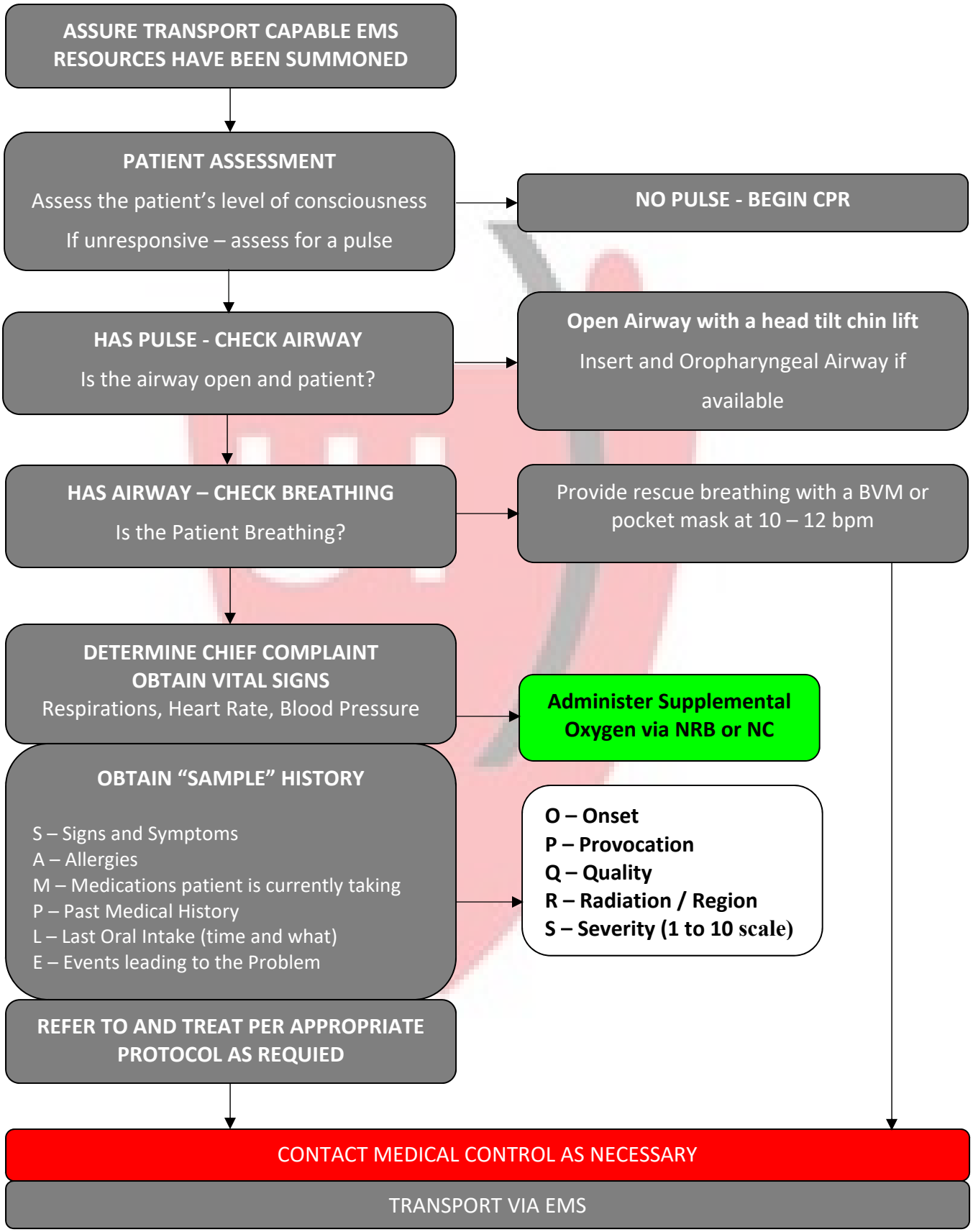
All algorithms are color coded to denote procedures, which may be performed by the Emergency Medical Responder. To perform procedure color - coded red, Medical Control must be contacted for permission. Higher levels of certification will perform lower level evaluations and procedures when interpreting the algorithms.

The protocol format is for quick reference and does not detail patient assessment, interpretation or interventions. EMS personnel are accountable for all patient care and documentation to their level of training.

COLOR CODES	
WHITE	Universal Patient Care Protocol / Patient Care Notes
GRAY	Emergency Medical Responder Skill and Assessment Level Interventions
GREEN	Medication Administration / Assist
RED	Medical Direction Contact / Authorization Required

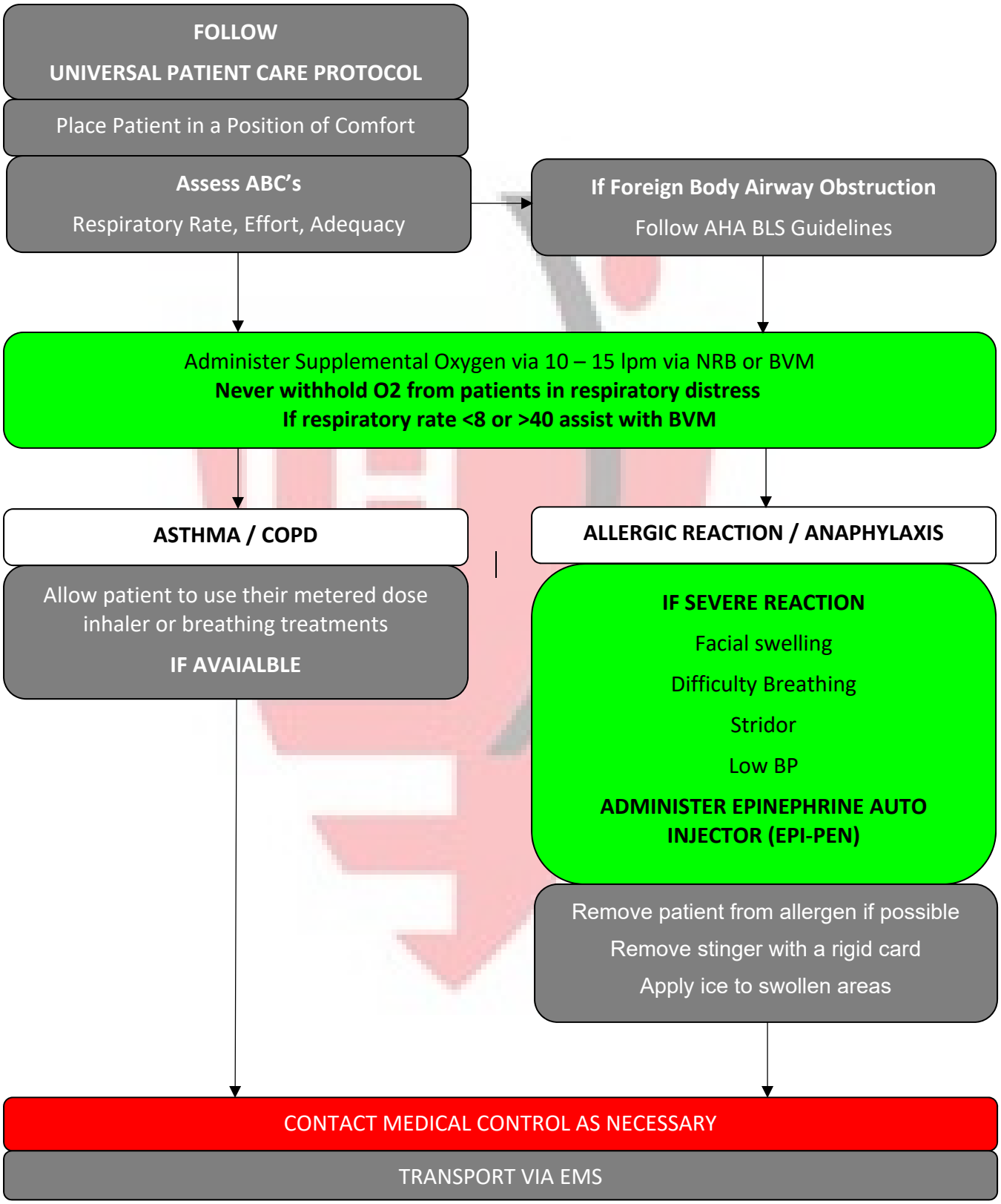
INTRODUCTION

UNIVERSAL PATIENT CARE PROTOCOL



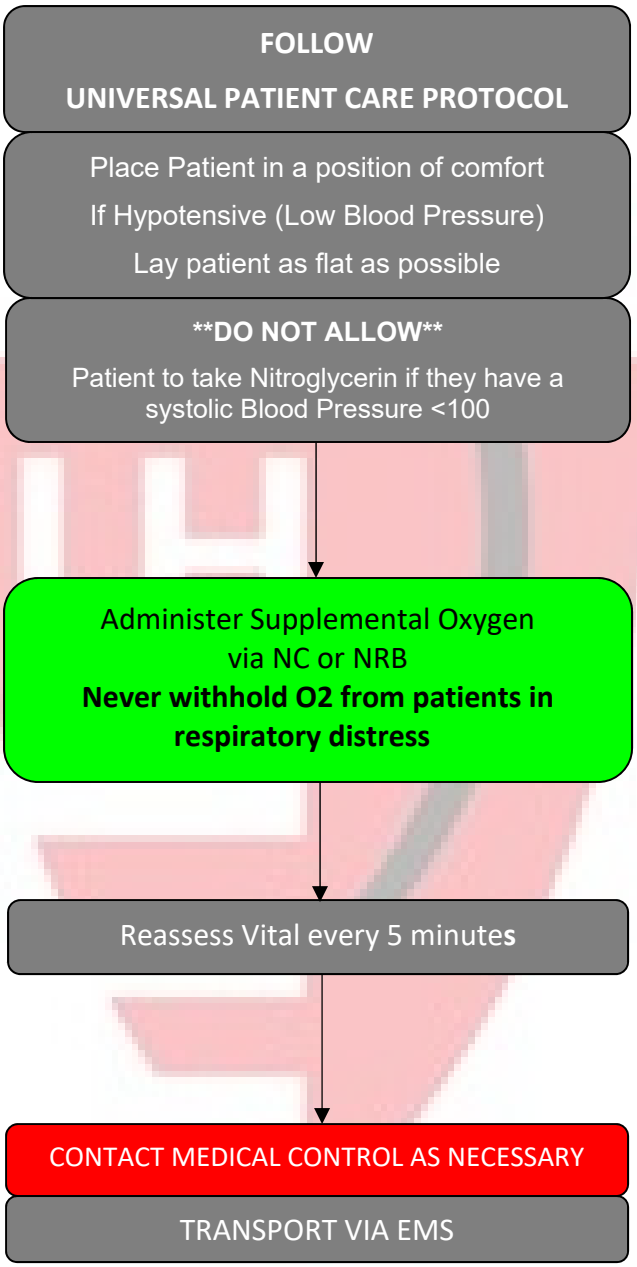
RESPIRATORY EMERGENCIES

MEDICAL EMERGENCIES



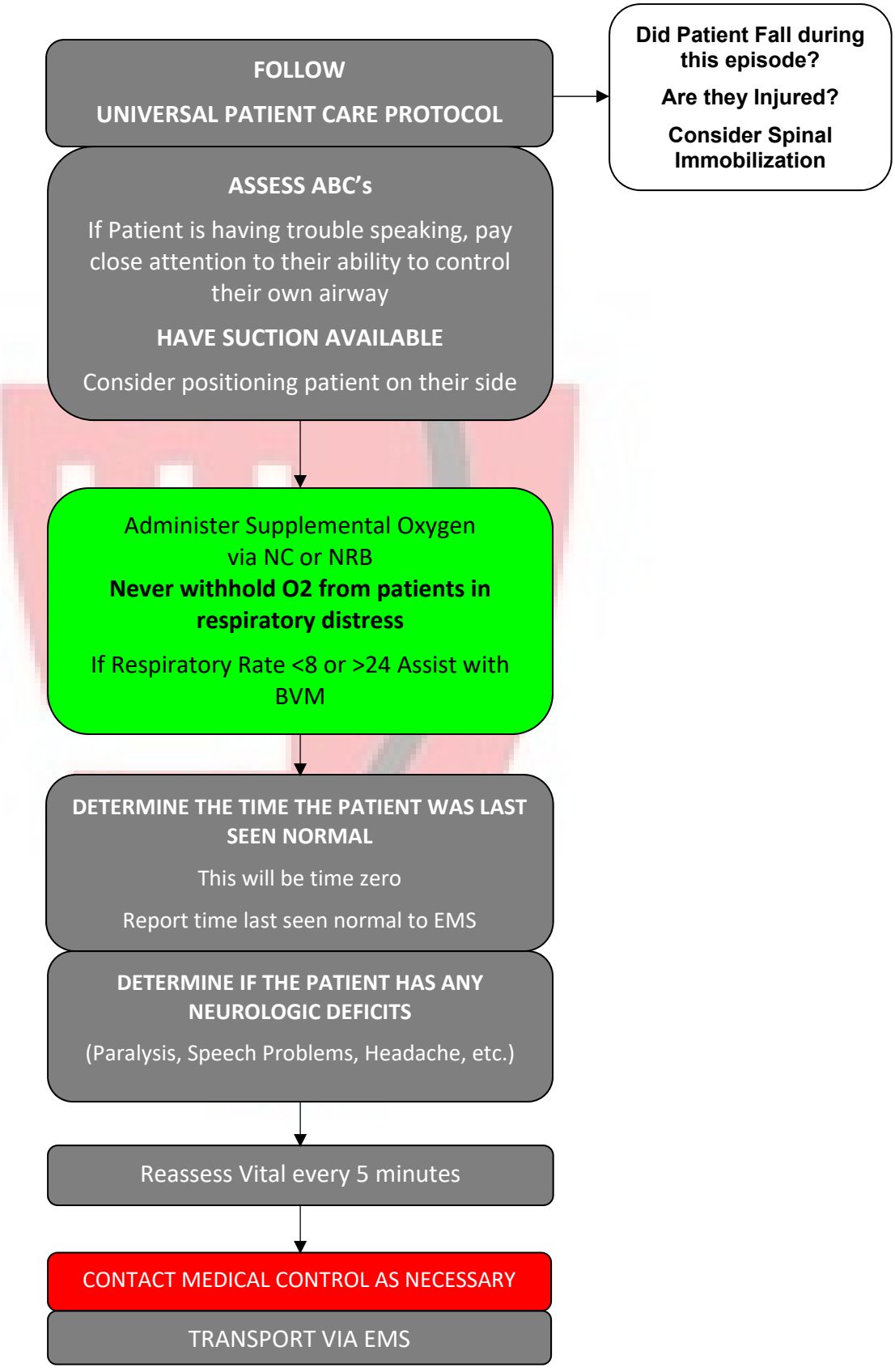
CHEST PAIN

MEDICAL EMERGENCIES



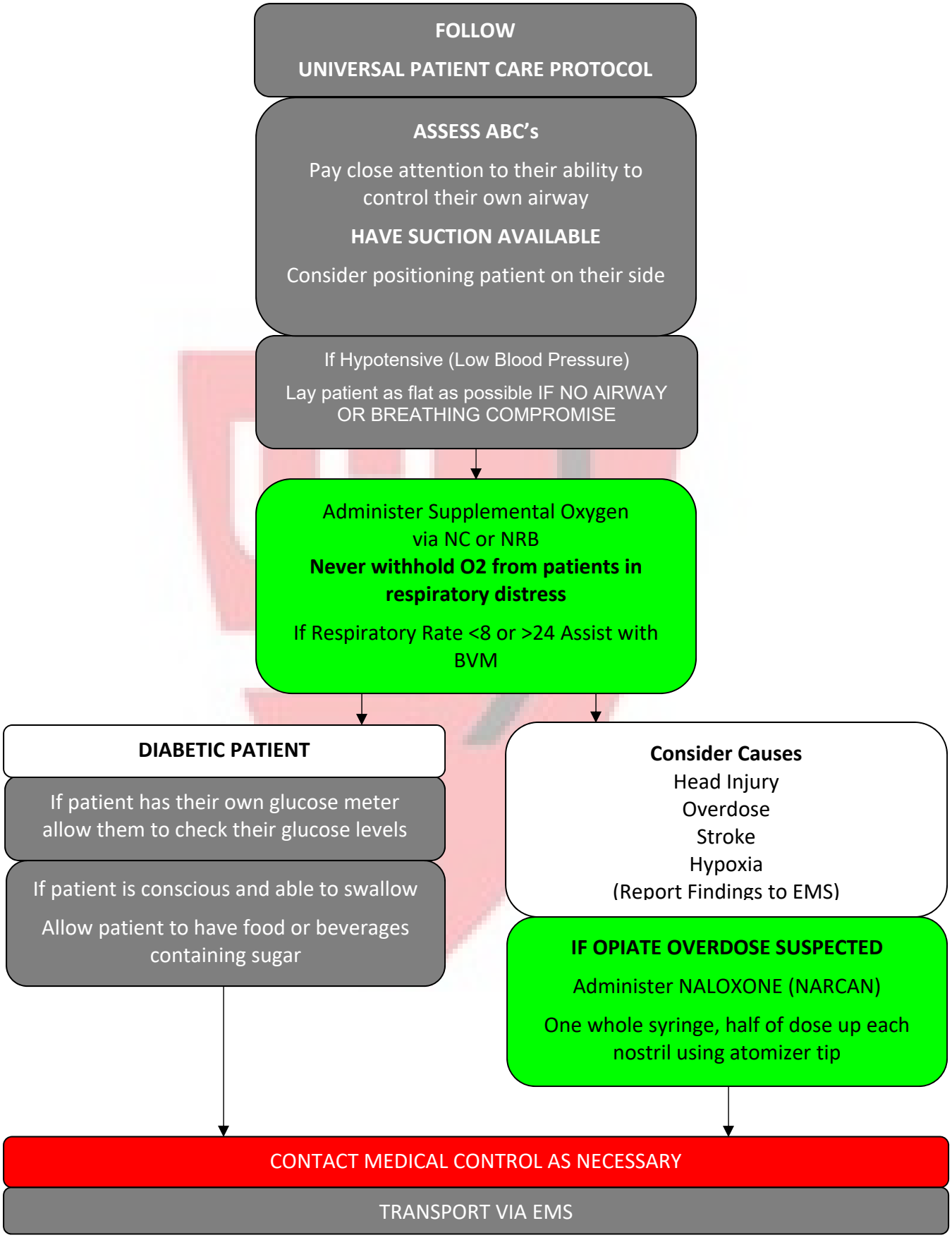
STROKE

MEDICAL EMERGENCIES



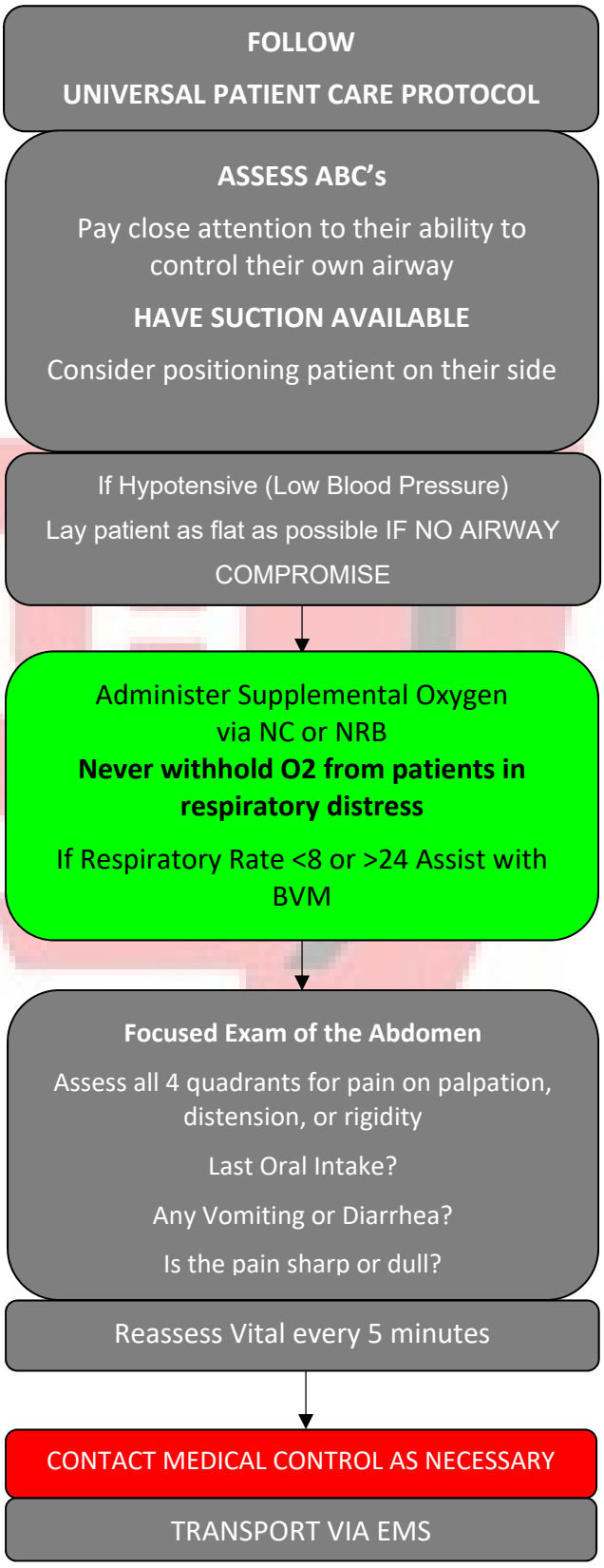
ALTERED MENTAL STATUS

MEDICAL EMERGENCIES



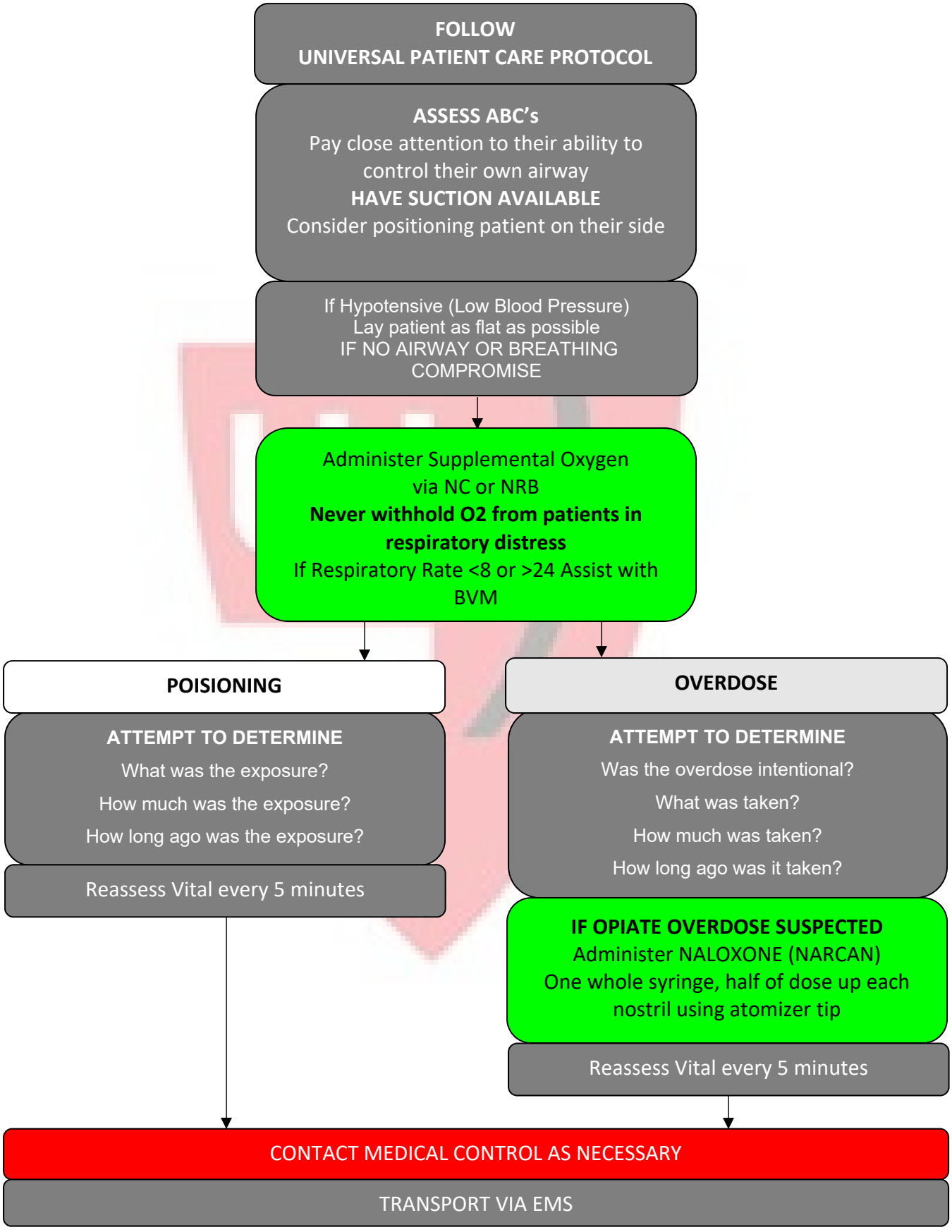
ABDOMIAL PAIN

MEDICAL EMERGENCIES



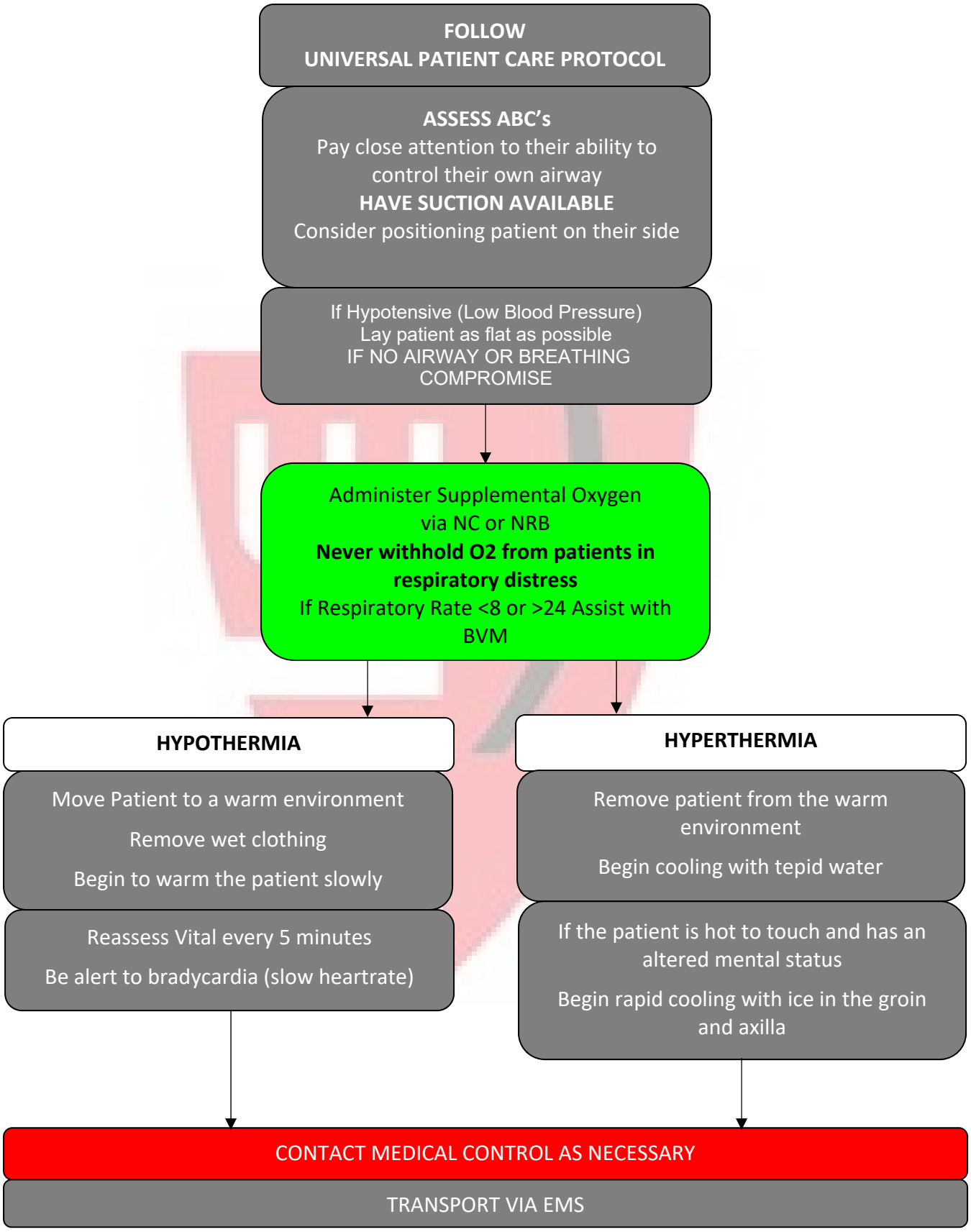
POISIONING / OVERDOSE

MEDICAL EMERGENCIES



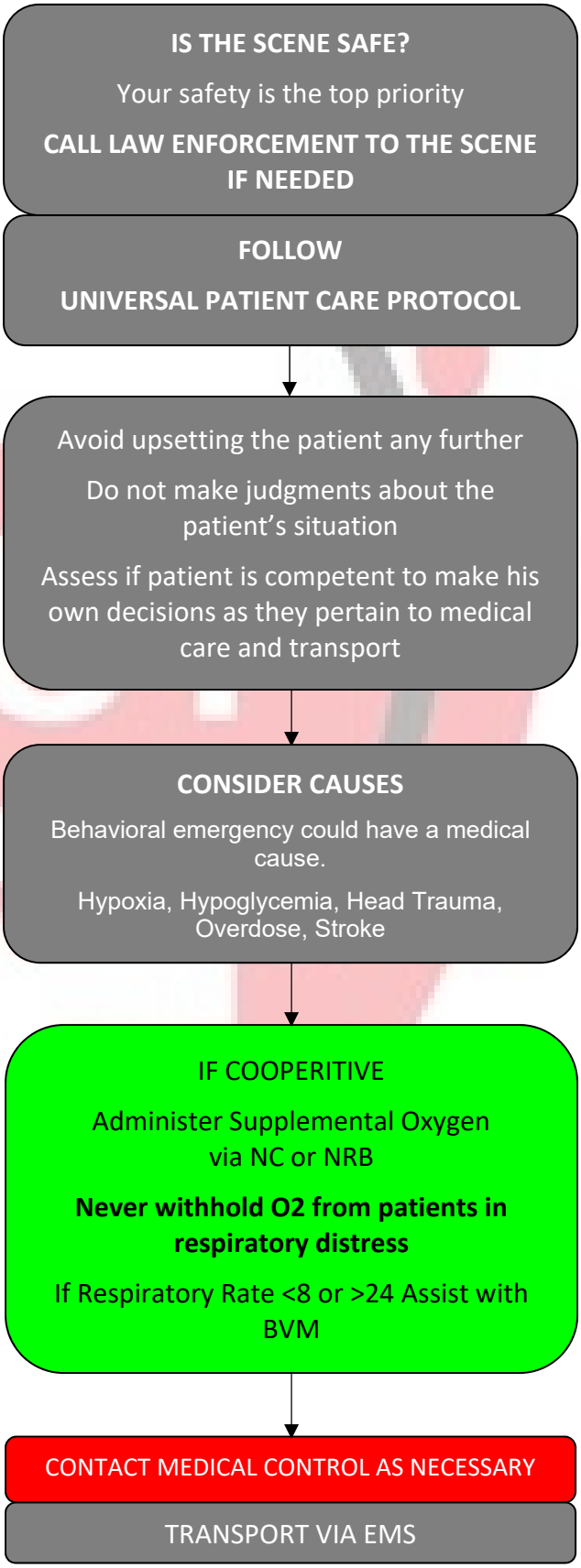
ENVIROMENTAL EMERGENCIES

MEDICAL EMERGENCIES



BEHAVIORAL EMERGENCIES

MEDICAL EMERGENCIES



CHILDBIRTH

MEDICAL EMERGENCIES

Determine if there is time for transport or whether delivery is imminent. Signs of imminent delivery include contractions 1-2 minutes apart, lasting 30-45 seconds, bulging membranes, or the presence of crowning.

- Activate the EMS system to expedite transport.
- If delivery **IS NOT** imminent, prepare patient for incoming ambulance.
- If delivery **IS** imminent, prepare to assist with the delivery.

FOLLOW UNIVERSAL PATIENT CARE PROTOCOL

Administer Supplemental Oxygen NRB 10-15 LPM

Protect Mothers Privacy and close off area from onlookers

Observe Head Crowning

Prepare Patient for Delivery
Set-Up Equipment

Delivery of Head
Apply firm, gentle pressure with flat of hand to slow expulsion.
Allow head to rotate normally, check for cord around neck, and wipe face free of debris.
Suction mouth and nose with bulb syringe.

Delivery of Body
Place one palm over each ear with next contraction gently move downward until upper shoulder appears.
Then lift up gently to ease out lower shoulder Support the head and neck with one hand and buttocks with other.
REMEMBER THE NEWBORN IS SLIPPERY

Newborn and Cord
Keep newborn at level of vaginal opening. Keep warm and dry. After 10 seconds, clamp cord in two places with sterile equipment at least 6-8" from newborn. Cut between clamps.

Allow placenta to deliver itself but do not delay transport waiting. **DO NOT PULL ON CORD TO DELIVER PLACENTA.** Take placenta to hospital with patient.

CONTACT MEDICAL CONTROL AS NECESSARY

TRANSPORT VIA EMS

CARDIAC ARREST / AED

MEDICAL EMERGENCIES

FOLLOW

UNIVERSAL PATIENT CARE PROTOCOL

RESPONSIVE PATIENT

FOLLOW APPROPRIATE PROTOCOL

UNRESPONSIVE PATIENT
Feel for a carotid pulse
IF no Pulse BEGIN CPR at 30:2 Compression to Ventilation ratio
Send someone to get the AED

When AED arrives:
Turn on the AED and follow the prompts
Attach the pads to patient's bare chest
(Continue chest compression while pads are being attached to the patient)
Plug in the pads connector
Clear patient so AED can analyze

If a shock is indicated:
Allow AED to charge
Clear everyone from touching the patient
Press the SHOCK button to deliver the shock
Immediately continue CPR

If NO shock is advised
Immediately continue 2 minutes of CPR
Continue to follow AED prompts

If patient begins to breath or starts to move stop CPR and assess vitals

After 2 minutes the AED will prompt you to clear the patient so the AED can analyze the rhythm

If a shock is indicated:
Allow AED to charge
Clear everyone from touching the patient
Press the SHOCK button to deliver the shock
Immediately continue CPR and follow AED prompts

CONTACT MEDICAL CONTROL AS NECESSARY

TRANSPORT VIA EMS

TRAUMA GUIDELINES

TRAUMA

Emergency medical service personnel shall use the following criteria, consistent with their certification, to evaluate whether an injured person qualifies as an adult trauma victim or pediatric trauma victim, in conjunction with the definition of trauma according to the State of Ohio Trauma Triage Guidelines.

An <u>Adult Trauma Victim</u> is a person 16 years of age or older exhibiting one or more of the following physiologic or anatomic conditions:

<u>Physiologic conditions</u>	**<u>Anatomic conditions</u>**

• Glasgow Coma Scale < 13
• Loss of consciousness > 5 greater minutes
• Deterioration in level of consciousness at the scene or during transport
• Failure to localize to pain
• Respiratory rate < 10 or > 29
• Requires endotracheal intubation
• Requires relief of tension pneumothorax
• Pulse > 120 in combination with evidence of hemorrhagic shock
• Systolic blood pressure < 90, or absent radial pulse with carotid pulse present
	• Penetrating trauma to the head, neck, or torso
	• Significant, penetrating trauma to extremities proximal to the knee or elbow with evidence of neurovascular compromise
	• Injuries to the head, neck, or torso where the following physical findings are present:
	  ◦ Visible crush injury
	  ◦ Abdominal tenderness, distention, or seatbelt sign
	  ◦ Pelvic fracture
	  ◦ Flail chest
	• Injuries to the extremities where the following physical findings are present
	  ◦ Amputations proximal to the wrist or ankle
	  ◦ Visible crush injury
	  ◦ Fractures of two or more proximal long bones
	  ◦ Evidence of neurovascular compromise
	• Signs or symptoms of spinal cord injury
	• 2nd or 3rd Degree > 10% total BSA or other significant burns involving the face, feet, hands, genitalia, or airway

Field Trauma Triage Criteria: Mechanism of Injury (MOI) & Special Considerations

Co-Morbid Diseases and Special Considerations:	Mechanisms of Injury (MOI)
• Age < 5 or > 55 • Cardiac disease • Respiratory disease • Diabetes • Immunosuppression • Morbid obesity • Pregnancy • Substance abuse/intoxication • Liver disease • Renal disease • Bleeding disorder/anticoagulation	• High speed MVC • Ejection from vehicle • Vehicle rollover • Death in same passenger compartment • Extrication time > 20 minutes • Falls greater than 20 feet • Vehicle versus bicycle / pedestrian • Pedestrian thrown or run over • Motorcycle crash > 20 mph with separation of rider from bike

KEY POINTS

Exceptions to Mandatory Transport to a Trauma Center:

Emergency medical service personnel shall transport a trauma victim directly to an adult or pediatric trauma center that is qualified to provide appropriate adult or pediatric care, unless one or more of the following exceptions apply:

- It is medically necessary to transport the victim to another hospital for initial assessment and stabilization before transfer to an adult or pediatric trauma center
- It is unsafe or medically inappropriate to transport the victim directly to an adult or pediatric trauma center due to adverse weather or ground conditions or excessive transport time
- Transporting the victim to an adult or pediatric trauma center would cause a shortage of local emergency medical service resources
- No appropriate adult or pediatric trauma center is able to receive and provide adult or pediatric trauma care to the trauma victim without undue delay
- Before transport of a patient begins, the patient requests to be taken to a particular hospital that is not a trauma center or, if the patient is less than eighteen years of age or is not able to communicate, such a request is made by an adult member of the patient's family or a legal representative of the patient

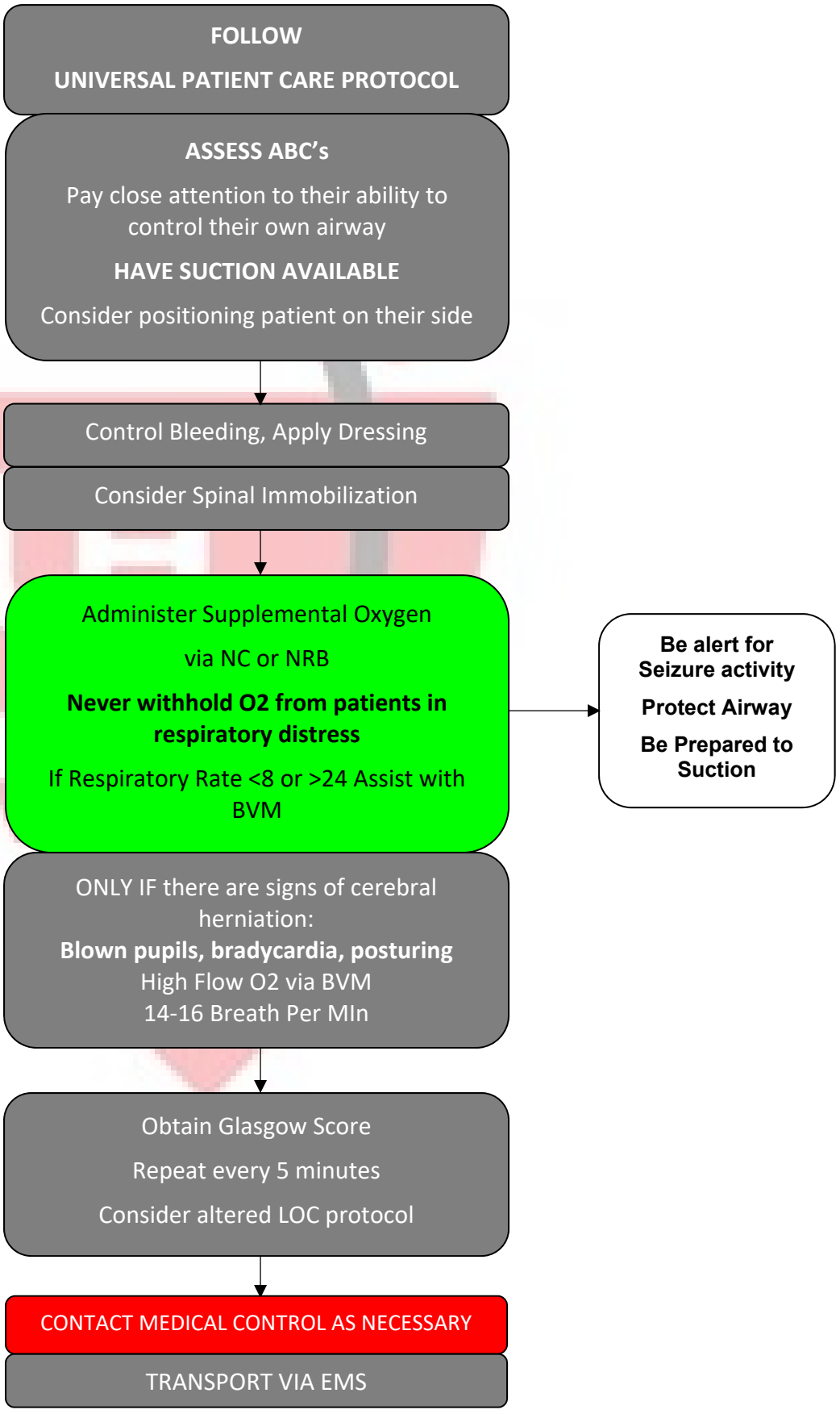
Glasgow Coma Scale

INFANT	**ADULT**
Birth to age 4	*Age 4 to Adult*
Eye Opening	
4 Spontaneously	Spontaneously 4
3 To speech	To command 3
2 To pain	To pain 2
___1 No response	No Response 1__
Best Verbal Response	
5 Coos, babbles	Oriented 5
4 Irritable cries	Confused 4
3 Cries to pain	Inappropriate words 3
2 Moans, grunts	Incomprehensible 2
___1 No response	No response 1__
Best Motor Response	
6 Spontaneous	Obeys commands 6
5 Localizes pain	Localizes pain 5
4 Withdraws from pain	Withdraws from pain 4
3 Flexion (decorticate)	Flexion (decorticate) 3
2 Extension (decerebrate)	Extension (decerebrate) 2
___1 No response	No response 1___
___ = TOTAL	TOTAL = ___

GCS $\leq$ 8? Intubate!

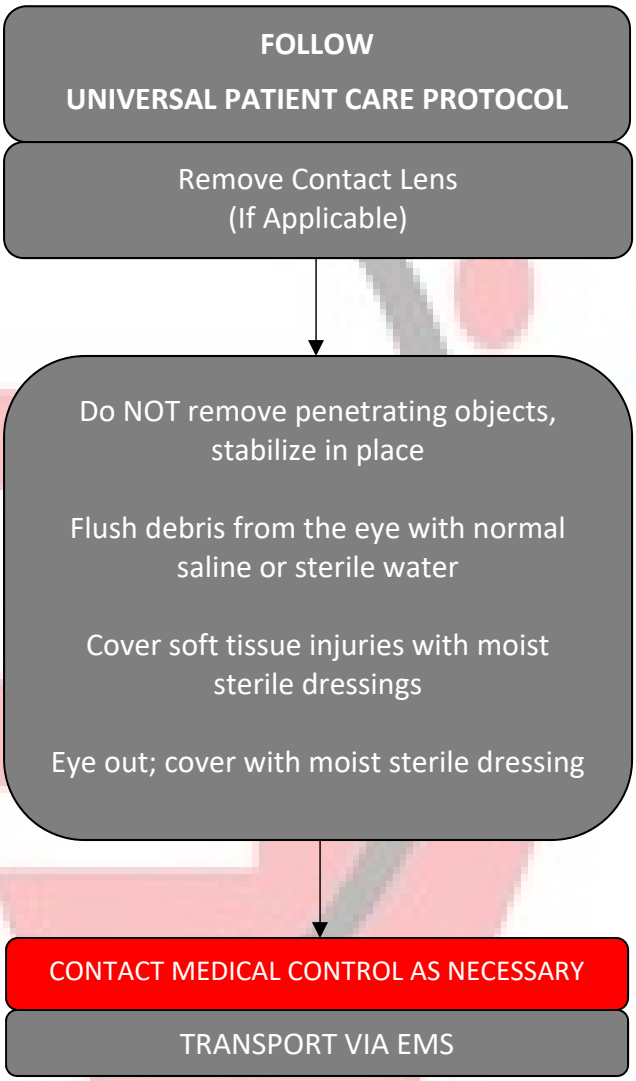
TRAUMA GUIDELINES

TRAUMA



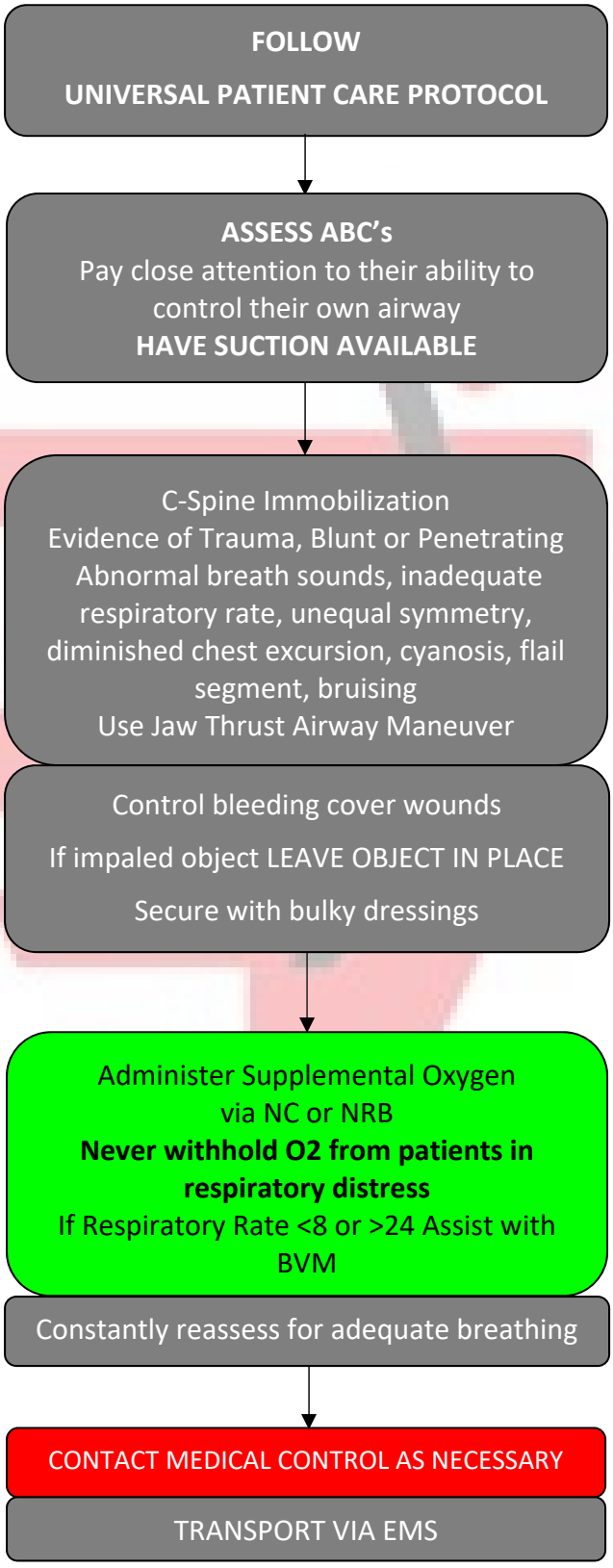
EYE INJURY

TRAUMA



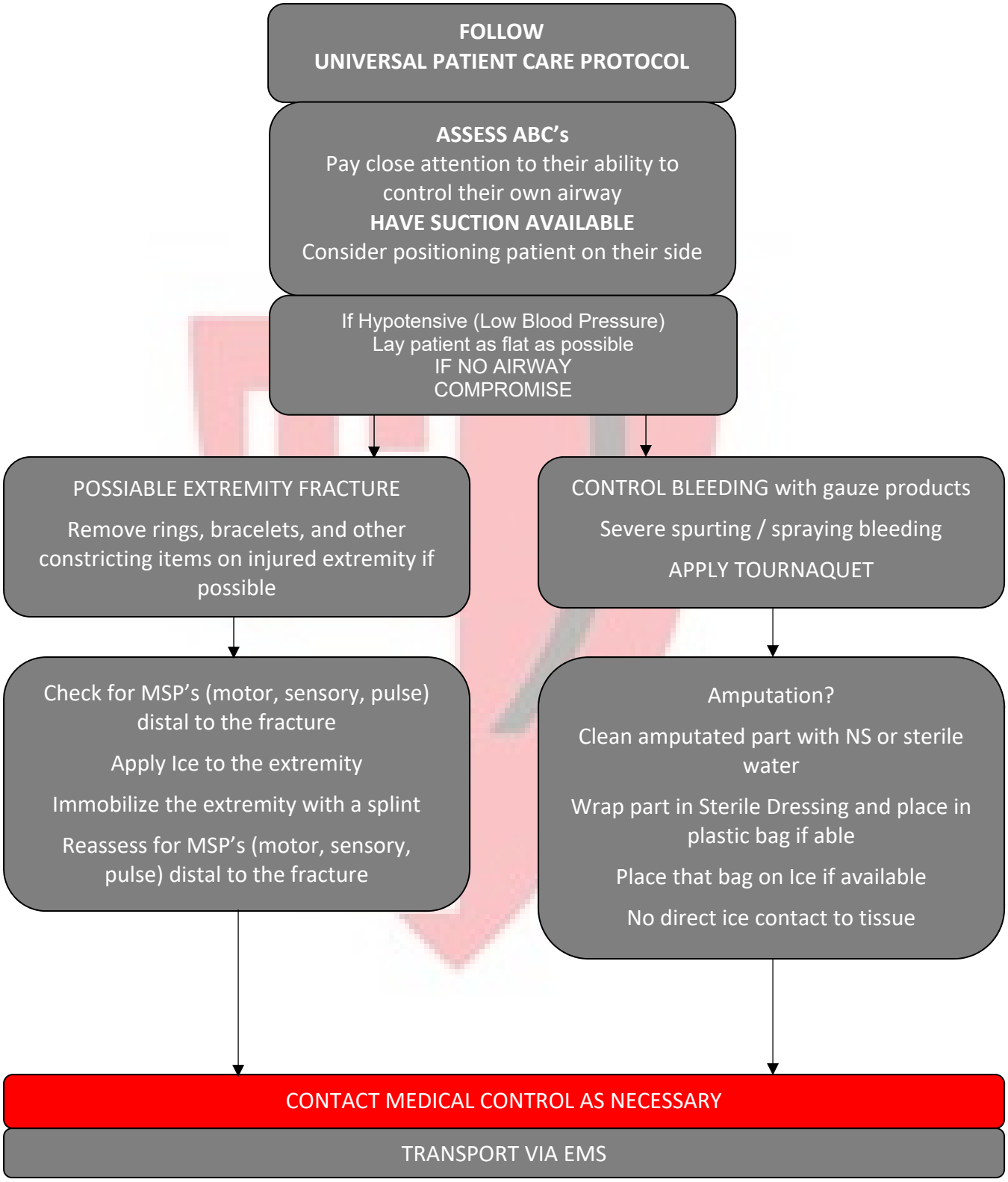
CHEST TRAUMA

TRAUMA



EXTREMITY / AMPUTATION TRAUMA

TRAUMA



BURNS

TRAUMA