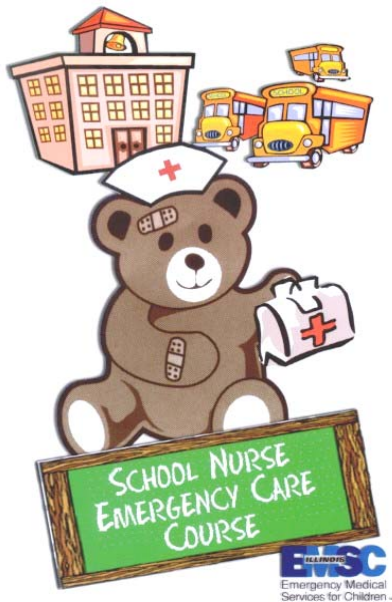


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# Guidelines for the Nurse in the School Setting

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Illinois  
Emergency Medical Services  
for Children

2010

## Illinois Emergency Medical Services for Children



is a collaborative program between the  
**Illinois Department of Public Health**

and

**Loyola University Medical Center**

[www.luhs.org/emsc](http://www.luhs.org/emsc)



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Special thanks are extended to the Illinois Association of School Nurses, the Illinois State Board of Education, and the School Health Program within the Illinois Department of Human Services, for their ongoing guidance and support.

## Review Committee

Laveda Albright, RN, TNS, CEN ▪  
Emergency Services Nurse  
Consultant

Lori Miller Cataldo, RN, BSN ▪  
School Nurse ▪ Arlington Heights  
School District 25

Julie D'Agostino, RN, MS, APN-CS,  
CEN, TNS ▪ Clinical Instructor,  
School of Nursing ▪ William Rainey  
Harper College

Mary Fisher, RN, BSN, MA,  
NBCSN, TNS ▪ Health Services  
Supervisor ▪ Rockford School  
District

Mary Fecht Gramley, RN, PhD,  
CEN, TNS ▪ Clinical Instructor ▪  
Waubonsee Community College  
School of Nursing

Susan Fuchs, MD, FAAP, FACEP ▪  
Assistant Director, Pediatric  
Emergency Medicine ▪ Children's  
Memorial Hospital

Margaret Gbur, RN, MSN, IL CSN ▪  
School Nurse ▪ Richards High  
School

Sandy Hancock, RN, MS, TNS ▪  
EmergiKids ▪ St Alexius Medical  
Center

Victoria Jackson, RN, MS, NCSN ▪  
Coordinator, School Health  
Program ▪ Illinois Department of  
Human Services

Evelyn Lyons, RN, MPH ▪ EMSC  
Manager ▪ Illinois Department of  
Public Health

Patricia McGleam, RN, BSN ▪  
EMSC Educator ▪ Loyola University  
Medical Center

Miriam Miller, MPH ▪ EMSC  
Preparedness Coordinator ▪ Loyola  
University Medical Center

Jody Moncado, RN, MS, IL CSN ▪  
School Nurse ▪ Rockford School  
District

Pat O'Connor, RN, BA, MEd,  
IL CSN ▪ School Nurse ▪  
Community Unit School District  
200

Phyllis Pelt, RN, MS, IL CSN ▪  
Health and Safety Chair, Illinois  
PTA ▪ Adjunct Instructor and  
Consultant ▪ University of Illinois-  
Chicago, College of Nursing

Linda Reimel, RN, BSN, MS ▪  
Regional EMS Coordinator ▪ Illinois  
Department of Public Health

Deborah Rice, RN, MSN, IL CSN ▪  
School Nurse ▪ Aptakisic-Tripp  
Community Consolidated School  
District 102

Debra Sansone, RN, MSN, IL CSN ▪  
School Nurse ▪ Hinsdale South  
High School

Debra Tauber, RN, BSN, TNS, CEN  
▪ Director of Nursing ▪ SunRise at  
Fountain Square-Lombard







# Introduction

Illinois Emergency Medical Services for Children (EMSC) recognizes the unique field of school nursing and the multiple roles that the nurse in the school environment is called upon to perform. The intent of the *Guidelines for the Nurse in the School Setting* is to provide nurses working in the school setting with a set of emergency care guidelines that can be utilized during the delivery of care to the ill or injured student.

It is important to note that there exist variations in school settings, services and access to resources and personnel. These differences can impact upon delivery of care. Illinois EMSC has made every effort to ensure that the information presented in this document is accurate and represents current accepted practice in the United States. However, the recommendations in this document are not intended to indicate an exclusive course of treatment or to be applicable in all circumstances or to serve as a substitute for the professional advice of a physician. It is recommended that care must always be based upon the student's clinical presentation and on authorized policies. We also recommend that you use the information in this document as a guide for developing local school policies and protocols. It is hoped that this document becomes a valuable addition to the nursing practice resources already available to school nurses.

Because schools provide services to students throughout the childhood and adolescent years, school nurses must be cognizant of pediatric developmental stages and able to provide age appropriate services and information. A baseline understanding of pediatric developmental characteristics and a general knowledge of appropriate approaches in the assessment and management of the varied age groups will be beneficial. The assessment and treatment approach when dealing with an injured or ill kindergartner is quite different from that of a high-school student, particularly when considering student participation in the decision making process, provision of educational information, and level of parental involvement. In addition, children with special needs or chronic conditions may require more frequent emergency care interventions due to their physical or mental disability and/or chronic illness.

The school nurse has a key role not only in providing emergency care to students, but also in developing prevention strategies. Many emergencies are avoided in the schools each day because school nurses have assisted in the education of teachers/school staff, parents/guardians and students in prevention and early intervention techniques. Proactive development of individualized health care plans and emergency care plans can also play a key role in prevention.

By working collaboratively with school administrators/staff, medical advisors, local EMS agencies, local health care practitioners, and parents/guardians, the school nurse can be instrumental in establishing a comprehensive program of emergency care aimed at reducing student morbidity and mortality.

Keeping abreast of practice changes and trends within the field of school nursing is critical. Resources that can assist in this effort are available through a variety of sources, particularly the **Illinois Association of School Nurses ([www.iasn.org](http://www.iasn.org))** and the **National Association of School Nurses ([www.nasn.org](http://www.nasn.org))**.



Lastly, educational programs leading to certification in the specialty of school nursing can enhance the practice of school nursing and the management of a comprehensive school health program. Certification represents a national standard of preparation, knowledge, and practice. The National Board for Certification of School Nurses (NBCSN) endorses the concept of voluntary certification by examination for all school nurses. Professional certification in school nursing provides an ongoing, quality credentialing process for eligible school nurses. The NBCSN provides the opportunity for school nurses to set the standards for their specialty area through voluntary professional certification.

In addition, Type 73 certification is available for school nurses in Illinois. There are currently four approved programs in our state through which the school nurse internship for the Type 73 School Nurse Certification may be obtained. These are listed below, along with contact information.

**Milikin University**, 1184 W. Main St., Decatur, IL 62522; 217-424-6374

**National Louis University**, 1000 Capitol Dr., Wheeling, IL 60090; 847-465-0575, x5373

**Southern Illinois University at Edwardsville**, School of Nursing, Edwardsville, IL 62026; 618-650-2000 or 1-800-234-4844

**University of Illinois-Chicago**, 1200 West Harrison, Chicago, IL 60607; 312-996-4350 or 312-413-0544

We hope that you find the *Guidelines for the Nurse in the School Setting* useful. Please feel free to contact the Illinois EMSC program at (708) 327-EMSC for any questions you may have or access our website at [www.luhs.org/emsc](http://www.luhs.org/emsc) for other pediatric emergency care resources.

Illinois EMSC has made every effort to ensure that the information presented in this document is accurate and represents current accepted practice in the United States. However, the recommendations in this document are not intended to indicate an exclusive course of treatment or to be applicable in all circumstances. We recommend that you use this document as a guide for developing local school policies and protocols.



# Pediatric Educational Recommendations for Professional Health Care Providers

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Because many aspects of emergency care are different for children than for adults, health care professionals with responsibility for children must have the specific knowledge, understanding and skills necessary to provide appropriate care. In addition, many health care practitioners have limited opportunities to apply their pediatric knowledge and skills. This emphasizes the need for ongoing education in order to refresh one's knowledge and skill base as well as to ensure clinical consistency with current practice guidelines. A statewide needs assessment conducted by Illinois Emergency Medical Services for Children (EMSC) identified that many prehospital and hospital health care practitioners feel the need for greater preparedness when caring for the critically ill or injured pediatric patient. Integration of pediatric focused educational curricula into healthcare provider primary and continuing education will assist in addressing this need. The educational needs of healthcare practitioners should be addressed through curricula that can focus on recognizing characteristic signs of serious illness or injury in children of all ages, timely pediatric assessment, stabilization and treatment modalities that favor improved outcomes. Pediatric focused education is emphasized for all practitioners whose duties bring them into contact with the pediatric population including first responders, EMT's at basic, intermediate and paramedic levels, emergency physicians, emergency nurses, pediatric nurses, pediatricians, family practitioners, clinic or office based personnel, school nurses and mid-level practitioners among others. In addition, the development of instructors with a strong pediatric knowledge base will provide the most effective means of ensuring the longevity of pediatric emergency care education. The Illinois Emergency Medical Services for Children (EMSC) Advisory Board supports the inclusion of the following pediatric focused educational initiatives into healthcare practitioner primary and continuing education. Pediatric emergency care course information can be viewed in the Education section of the Illinois EMSC web site at [www.luhs.org/emsc](http://www.luhs.org/emsc).

## ***School Nurse Emergency Care Course (SNEC)***

The Illinois EMSC program sponsors this 3 day course within our state. The targeted audience is specifically school nurses. The course is designed to enhance the assessment and appropriate triaging skills of the school nurse when confronted with the acutely ill or injured child. With the increasing number of urgent health related conditions seen within the changing school environment and the need to assure emergency and disaster preparedness, this course supports the school nurse's core knowledge base in responding to these situations. The School Nurse Emergency Care course recognizes school nurses as skilled professionals, while remaining cognizant of the limited support and resources for emergency care interventions afforded by the school health environment. The course is team taught by both school nurses and emergency department nurses since both perspectives are essential in delivering the emergency training. Course content contains lectures, case presentations and skill stations. Contact hours are



obtained through the American Nurses Credentialing Center's Commission on Accreditation. CPDU hours are available through the Illinois Association of School Nurses. Course renewal is recommended every four years.

The SNEC curriculum emphasizes an appropriate assessment and triage approach and addresses the following topics:

- Your Role in Emergency Planning
- Legal Issues in Nursing
- Assessment and Triage
- Trauma
- Respiratory Emergencies
- Shock
- Neurologic Emergencies
- Eye, Ear, Nose, Throat, and Dental Emergencies
- Environmental Emergencies
- Abdominal and Genitourinary Emergencies
- Musculoskeletal Emergencies
- Emergencies Involving Mental or Behavioral Health
- Medical Emergencies
- Planning for Students With Special Health Care Needs
- School Emergency Response and Crisis Management

### ***Advanced Pediatric Life Support (APLS)***

This two day course focuses on the initial management of illnesses and injuries that, if left untreated, could lead to life threatening pediatric conditions requiring resuscitation. The course content is primarily oriented toward emergency diagnosis and response. The course format combines lectures with small group sessions that allow for case presentations and hands-on experience. Sponsored by the American College of Emergency Physicians (ACEP) and American Academy of Pediatrics (AAP), this course is recommended for all physicians and other healthcare professionals who are responsible for the management of acutely ill or injured children. For more information, go to [www.acep.org](http://www.acep.org).

### ***Emergency Nursing Pediatric Course (ENPC)***

This 16 hour comprehensive pediatric course is sponsored by the Emergency Nurses Association (ENA) and is tailored specifically to meet the educational needs of the nurse in an emergency setting. The focus of this course is to teach nurses the various aspects of pediatric emergency nursing care. Lectures and skill stations emphasize the appropriate triage, assessment and management of the ill or injured pediatric patient. The course is designed to provide core-level pediatric knowledge and psychomotor skills associated with the delivery of professional nursing care to the pediatric patient. For more information, go to [www.ena.org](http://www.ena.org).

### ***ITLS Pediatric – International Trauma Life Support Pediatric Provider Course***

This course builds upon a core knowledge base of trauma care. The course emphasizes the practical training needed to assure that the prehospital provider is confident and competent when faced with caring for the critically injured child. The course focuses specifically on prehospital care of the pediatric trauma patient. The Illinois College of Emergency Physicians (ICEP) sponsors the ITLS Pediatric Provider course which is approved by International Trauma Support. For more information, go to [www.itrauma.org/education](http://www.itrauma.org/education).



### ***NRP – Neonatal Resuscitation Program***

This joint American Heart Association (AHA) and American Academy of Pediatrics (AAP) sponsored course was designed to teach an evidence-based approach to resuscitation of the newborn. The causes, prevention, and management of mild to severe neonatal asphyxia are carefully explained so that health professionals may develop optimal knowledge and skill in resuscitation. For more information, go to [www.aap.org](http://www.aap.org).

### ***Pediatric Advanced Life Support (PALS)***

This American Heart Association (AHA) and American Academy of Pediatrics (AAP) sponsored course focuses primarily on pediatric resuscitation. It provides the information needed for recognizing the child at risk for cardiopulmonary arrest, strategies for preventing cardiopulmonary arrest in the pediatric population and reinforcement of the cognitive and psychomotor skills necessary for resuscitating and stabilizing the infant and child in respiratory failure, shock or cardiopulmonary arrest. This two day course is geared toward all advanced healthcare professionals who provide care to children. For more information, go to [www.americanheart.org](http://www.americanheart.org).

### ***Pediatric Education for Prehospital Professionals (PEPP)***

The American Academy of Pediatrics (AAP) sponsors this course which aims to prepare prehospital professionals in the management of the pediatric patient. This highly interactive course combines lectures, videos, hands-on skill stations and small group scenarios. The course has a one day BLS format or a two day ALS format. For more information, go to [www.peppsite.com](http://www.peppsite.com).

### ***PEARS – Pediatric Emergency Assessment, Recognition and Stabilization Course***

This American Heart Association (AHA) sponsored one-day course is designed for healthcare professionals who infrequently see critically ill children. It supports those who are not credentialed in advanced pediatric skills and who do not routinely provide pediatric advanced life support. PEARS prepares students to assess, categorize, decide, and act early to stabilize the child. The main focus of PEARS is prevention, and specifically the assessment, recognition and stabilization of pediatric victims at risk of severe cardiopulmonary distress. PEARS is a video-based course with instructor-led discussion. For more information, go to [www.heart.org](http://www.heart.org).

### ***JumpSTART - Pediatric Multicasualty Incident Triage Illinois JumpSTART Workshop***

JumpSTART is a pediatric triage algorithm/process that was developed to help meet the needs of children and responders at disaster/mass casualty incidents. It was developed by Lou Romig, MD, FAAP, FACEP, Miami Children's Hospital, Miami, FL. In conjunction with Children's Memorial Hospital (Chicago), the Illinois EMSC program sponsors a training workshop that reviews the unique needs of children in a disaster, mass casualty triage principles, the START (Simple Triage and Rapid Treatment) system for adults and the JumpSTART MCI Triage System for Children. The workshop also includes interactive scenarios/exercises. This education targets first responders, prehospital personnel, nurses, physicians and other healthcare professionals. For more information on JumpSTART, go to [www.jumpstarttriage.com](http://www.jumpstarttriage.com).





# Assessment and Triage

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This section reviews key steps in the assessment and triage process, as well as various tools that may be useful in your practice.

## Assessment as a Lifesaving Tool

To the students in your school, your importance as a health care provider cannot be overstated. Each day, you may treat 5% to 10% of the total student population for problems ranging from mild stomach aches or minor lacerations to life-threatening asthma or traumatic brain injury. Over the course of a typical career as a school nurse, you will alleviate pain and prevent suffering on a daily basis; and in all likelihood, you will save lives.

When a student experiences emergent illness or injury, your actions can, in some cases, make the difference between permanent disability and full recovery. With so much in the balance, it is essential to assess the student's condition swiftly and accurately, without overlooking important physical and historical findings. These findings provide the basis for selecting and prioritizing interventions, evaluating the student's response, and determining disposition.

A systematic, consistent approach is key to this process.

## Five Components of a Systematic Assessment

A systematic assessment can be broken down into 5 major components, each of which has a specific role in emergency nursing care:

### *Scene safety assessment*

Ensure that it's safe to approach, or call for backup assistance as necessary.

### *Across-the-room assessment*

**Immediately** activate EMS if the situation is obviously emergent.

### *Initial assessment (ABCDE)*

Identify and treat problems that threaten life, limb, or vision.

### *History*

Gather background information essential to your triage decision.

### *Focused physical examination (FGHI)*

Measure and record vital signs; inspect, auscultate, and palpate to identify or investigate additional problems.

These components can be adapted to virtually any situation you may face in the course of a day, giving you a safe, consistent basis for clinical decision-making and nursing interventions. The culmination of the systematic assessment is an accurate triage determination, appropriate interventions, and final disposition.

**NOTE** | During an actual emergency, you'll go through these 5 components almost simultaneously, in far less time than it takes to describe them.





### Additional actions

Once the emergency is over, it's also important to attend to

- Documentation, including data collection
- Evaluation and follow-up
- Planning and prevention

This chapter provides an overview of the steps needed to complete each of these components, from assessment to triage to postincident activities. Additional details and examples of how you'll use these tools in specific situations are the focus of the chapters that follow. Your own experience and common sense are what bring the steps together into a congruent whole.

### Three key points

Three of the techniques that foster a successful approach to assessment are briefly noted below. You may find it helpful to keep them in mind as you visualize applying these steps in your own practice.

Use developmentally appropriate language

#### KEY POINT

**Remember to use developmentally appropriate language when addressing students, especially younger children.**

It's important to talk to the student throughout the assessment process, explaining your actions and providing reassurance. Be sure to use developmentally appropriate language and techniques as you interact and communicate. You must also try to attune yourself to the various ways a child could interpret your meaning. For example, the phrase *take your blood pressure* could be interpreted to mean that you are literally about to take away something having to do with blood. To prevent misunderstandings, say instead, *I'm going to **measure** your blood pressure*, or for younger students, *I'm going to give your arm a hug*.

**NOTE** | Language, culture, technology, and environment may affect the assessment process. Enlist special resources as needed to help you communicate effectively with the student.

Gather history information throughout the process

#### KEY POINT

**If possible, gather focused history information as you perform each step of the assessment.**

As you talk to the student and explain what you're doing, it's natural to ask questions about the injury or illness you're assessing. Use this technique to gather as much of the focused history information as possible while you perform the initial assessment and provide interventions, as this will help you to evaluate your findings more accurately. If the student is unable to respond to your questions, query others who were present when the incident arose.





Treat significant problems as you go

#### KEY POINT

**It is essential to take any necessary actions before moving on to the next step of the assessment.**

As you progress through the assessment components, it is essential to take any necessary actions **before** moving on to the next step. Immediately treating such life-threatening problems as airway obstruction or inadequate ventilation will help to ensure optimal outcome.

Similarly, although triage is presented as the end result of a complete assessment, in practice you will activate EMS at the earliest sign of an emergent situation.

## Scene Safety Assessment

### Hazards

Before rendering aid, you must ensure your own safety as well as that of the student and others present. Even within the health office, maintain a constant awareness of circumstances that could affect your own safety or that of others present. To determine whether you can safely approach the student, look for the following hazards:

#### *Substances*

Blood or other body fluids, noxious fumes, toxic chemicals.

#### *Situational dangers*

An armed perpetrator, hostages, weapons.

#### *Environmental dangers*

An unstable structure, fire, electrical hazards, or other potential mechanisms of injury.

#### KEY POINT

**Never place yourself in danger. If you cannot control a hazard, do not approach the student.**

**Never** place yourself in danger. If you cannot control hazards, **do not** approach the student—call 911 or your local emergency number to activate backup assistance.

### Resources

If the situation does not appear hazardous, you may find it useful to consider briefly whether you have the equipment and resources you need to manage the incident at this time. For example, you might send for

- Additional personnel to help you with interventions or to manage bystanders
- Personal protective gear or specialized equipment (such as an automated external defibrillator, backboard, cold packs, or splints) that isn't in your portable emergency kit



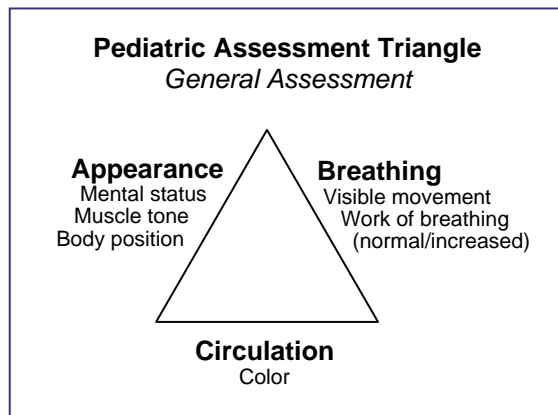
**NOTE** Always be prepared for unexpected emergencies. Carry disposable gloves and a resuscitation mask at all times, and make sure these items are available in key locations for anyone who might need them.

## Across-the-room Assessment

### KEY POINT

The across-the-room assessment is a quick overall appraisal of the student's condition based on appearance, breathing, and circulation.

**FIGURE 1. PEDIATRIC ASSESSMENT TRIANGLE**



Reprinted with permission from the *Teaching Resource for Instructors in Prehospital Pediatrics–BLS*, ed 2 (2006).

The across-the-room assessment is a natural continuation of the scene safety assessment as you focus your attention on the student. Briefly evaluate the student's appearance, breathing, and circulation as illustrated in the Pediatric Assessment Triangle (Figure 1). This allows you to decide in a few moments how quickly you must proceed with further assessments and interventions.

During the initial assessment that follows, you will revisit these areas to perform a hands-on evaluation with interventions. At this point, you simply want to form an overall impression of vital functions.

### Appearance

Appearance refers to **mental status**, **muscle tone**, and **body position**. Mental status, in turn, is based on both **level of consciousness** and the student's **interactions with others**. Ask yourself the following questions:

- Does the student appear to be awake and aware of surroundings? Is the student aware of the injury or illness?
- If awake, what is the student's emotional response to the current situation? (calm, confused, anxious, agitated, angry, depressed)
- Does the student seem appropriately responsive to others present (looking around, responding to questions) or dull and apathetic?
- Is there evidence of normal muscle tone (sitting or standing upright, able to walk), or does the student appear limp?
- How is the student positioned? (sitting normally, maintaining a tripod position, lying supine)



## Breathing

Breathing refers to the presence or absence of **visible movement** at the chest or abdomen and **work of breathing**:

- Can you confirm at a glance that the student is breathing?
- Is there evidence that the student is working hard to maintain adequate ventilation? (flaring nostrils, retractions, difficulty speaking)

## Circulation

Circulation refers to **visible skin color**, an indication of perfusion to vital organs.

- Does the student's color appear normal?
- If not, does it appear pallid, dusky, mottled, cyanotic, or flushed?

## Conclusions

Combine the evidence of your observations with your intuition and experience to form a first impression of the student's level of distress: Compared with baseline, does this student look well, ill, or seriously ill? Take into account any clearly visible signs and symptoms of illness or injury, such as emesis, bleeding, deformities, or expressions of pain.

## Next steps

If the student's condition is clearly emergent—for example, the student is struggling to breathe, turning dusky or cyanotic, exhibiting seizure activity, bleeding profusely—activate EMS **immediately**, then approach the student and proceed with the initial assessment and interventions.

## Initial Assessment

The initial (**ABCDE**) assessment focuses on **A**irway, **B**reathing, **C**irculation, **D**isability (neurologic status), and a brief physical **E**xposure to examine parts of the body directly related to the chief complaint. Table 1 provides an overview of the process.



TABLE 1. INITIAL (ABCDE) ASSESSMENT

	Assessment	Interventions
<b>A</b>	<b>Airway</b> <i>Position, sounds, obstruction</i>	Stabilize cervical spine if trauma is possible or mechanism of injury is unknown. Open airway if necessary, using jaw thrust or chin lift as appropriate. Position student to maintain airway patency. Look and listen for signs of obstruction. Perform airway-clearing maneuvers as indicated.
<b>B</b>	<b>Breathing</b> <i>Rate, depth/pattern, symmetry, sounds, work of breathing, odors, injuries</i>	Position student for maximum ventilatory ability. Give oxygen as tolerated if available. Provide mouth-to-mask ventilation if needed.
<b>C</b>	<b>Circulation</b> <i>Heart rate and quality of pulses, capillary refill time, skin color, temperature, and moisture, bleeding</i>	Initiate CPR if needed; control bleeding with pressure dressings and elevation of the affected limb.
<b>D</b>	<b>Disability (neurologic status)</b> <i>Level of consciousness via AVPU; pupillary response</i>	Provide reassurance; position to maintain comfort; give oxygen if available.
<b>E</b>	<b>Exposure with Environmental control to prevent heat loss</b> <i>Observe and inspect for additional emergent problems</i>	Treat wounds or other findings as appropriate. Treat as necessary to maintain normothermia.

As you interpret your assessment findings, keep in mind that many factors besides illness or injury can contribute to deviations from the norm. It is important to be aware of these factors so that you can take them into account. For example:

- Certain medications can cause the breathing rate and heart rate to be fast or slow
- A cold ambient temperature can delay capillary refill and affect other skin findings
- Fear, fever, and pain typically increase the respiratory rate and heart rate
- Students with certain chronic conditions may have baseline vital signs that fall outside the normal range for age

Also note that, since children's vital signs vary by age, subtle abnormalities are easily overlooked. During the initial assessment, however, you are looking primarily for overt discrepancies compatible with severe conditions. If none are present, you'll have time to assess for less obvious signs during the focused physical examination.

#### KEY POINT

**The goal of the initial assessment is to identify and treat life-threatening emergencies. Activate EMS as soon as the need becomes evident.**

The goal of the initial assessment is to identify and treat life- or limb-threatening emergencies. As you progress through the assessment, provide interventions as necessary to maintain the airway, breathing, and circulation **before** continuing on to the next step. If at any time the student cannot maintain airway patency,



adequate ventilation, or adequate perfusion, **immediately** activate EMS. Notify the parent/guardian as soon as you are able to do so.

**NOTE** | When performing a physical assessment, always observe standard precautions to prevent exposure to body fluids.

### Spinal stabilization

If there is any possibility of injury to the head or spine, provide manual stabilization of the cervical spine before you begin the airway assessment. Note that you will need to maintain spinal stabilization until EMS personnel arrive.

### Airway

Look, listen, and feel for signs of patency:

- Can you **see** movement of the chest or abdomen?
- Can you **hear** airway sounds, such as stridor, wheezing, or coughing?
- Can you **feel** air exchange at the mouth or nose?

Open the student's mouth and inspect for sources of airway obstruction.

#### Interpreting your findings

- Drooling or inability to talk may indicate upper airway edema from infection or anaphylaxis
- Stridor (a crowing sound) indicates upper airway obstruction
- Facial injuries can compromise the airway

### Breathing

- Note the respiratory rate (normal, fast or slow, apnea), the depth and pattern of breathing (shallow, gasping, irregular), and bilateral symmetry of chest movement
- Listen for adventitious breath sounds, such as wheezing or grunting
- Watch for signs indicating increased work of breathing (retractions, nasal flaring, difficulty speaking)
- Note any unusual breath odors (fruity; reminiscent of petroleum products, tobacco, or alcohol)
- Evaluate chest wall integrity, noting any obvious injuries

#### Interpreting your findings

- Increased work of breathing and audible breath sounds indicate respiratory compromise
- Fast breathing is an early compensatory mechanism for hypoxia; breathing slows as hypoxia worsens
- Decreased, absent, or unequal breath sounds may indicate airway obstruction, a pneumothorax, hemothorax, or atelectasis



- Grunting is a late sign of severe respiratory distress that is worsening into respiratory failure

## Circulation

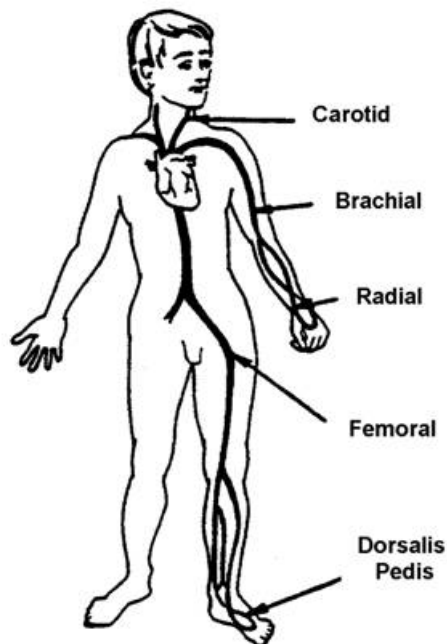
During the **Circulation** assessment, you will

- Assess heart rate and quality of pulses
- Evaluate perfusion by assessing
  - Capillary refill time (normally less than 2 seconds)
  - Skin color (normal, pallid, dusky, mottled, cyanotic, flushed)
  - Skin temperature and moisture (warm, dry, cool, clammy)
- Look for active bleeding (none, minor, moderate, profuse; controlled or uncontrolled)

### Heart rate and quality of pulses

Measure the heart rate by palpating the pulses. Evaluate the quality of the pulses and note discrepancies between the central and peripheral pulses at the same time. Pulse points are shown in Figure 2.

FIGURE 2. PULSE POINTS



Although you won't actually measure the student's blood pressure until after the history and pain assessment, the pulses can be roughly correlated with blood pressure as follows:

- If you can palpate the carotid pulse, the systolic blood pressure is at least 60 mm Hg.
- If you can palpate the femoral pulse, the pressure is at least 70 mm Hg.
- If you can palpate the radial pulse, the pressure is at least 80 mm Hg.

### Perfusion

#### Capillary refill time

Assess capillary refill at the distal extremities with the limb positioned so that it is level with the heart. Firmly press and release the skin to blanch the underlying capillary bed. Color should return in less than 2 seconds.

### Color

Inspect skin color at the lips and tongue. Note whether skin color seems normal, pale or flushed, mottled or cyanotic.



**NOTE** | To assess skin color in students with dark skin pigmentation, check the nail beds, palms, or mucous membranes

### Temperature

Feel skin temperature at the extremities and compare with temperature at the more central body regions. It may be significant if skin is either unusually hot or cold.

### Moisture and quality

Note dryness or clamminess. Pinch gently to check for normal elasticity.

### Bleeding

Look for profuse external bleeding.

### Interpreting your findings

- Tachycardia is usually the earliest sign of developing shock in children; tachycardia combined with a fast respiratory rate is a strong indicator of compensated shock (see Chapter 6: *Shock*)
- Thready or weak pulses, cool, clammy extremities, and delayed capillary refill time are also associated with shock
- A discrepancy between the central and peripheral pulses may be an early sign of decreasing stroke volume
- Hypotension with bradycardia is a late, ominous sign of decompensated shock
- Skin that is inelastic and prone to tenting usually signifies dehydration

### Disability

The **Disability** assessment is a brief evaluation of neurologic function. Assess level of consciousness using the **AVPU** Scale (Table 2), then evaluate pupil size and reactivity.

**TABLE 2. AVPU SCALE**

	Mnemonic	Associated Findings
<b>A</b>	<b>Alert</b>	The student is awake and able to speak or interact spontaneously
<b>V</b>	<b>Verbal</b> (responds to verbal stimulus)	A verbal stimulus elicits some response; for example, the student's eyes may open when you call loudly, or agitation may lessen in response to a command
<b>P</b>	<b>Painful</b> (responds to painful stimulus)	The student responds to a painful stimulus by moaning, crying, or withdrawing from pain
<b>U</b>	<b>Unresponsive</b>	The student shows no response to verbal or painful stimuli



### Interpreting your findings

Level of consciousness is an important indicator of adequate perfusion. A significant reduction in responsiveness is an ominous sign in a student who has a mechanism that may cause respiratory compromise or shock.

## Exposure

Remove clothing as needed to briefly assess specific factors related to the presenting problem, such as injuries, rashes, bites, or stings. Watch for signs of internal hemorrhage. Control ambient temperature if possible or drape the student with coverings as necessary to prevent heat loss. Replace clothing as soon as you are able to do so.

## History

Information gathered from the health history helps you form a plan of care. You may already be familiar with the student's history from information supplied by the parent/guardian, primary health care provider, and school staff or from previous interactions with the student. Make sure your understanding of current health issues is up-to-date, and get specific details relevant to the incident at hand.

**NOTE** | In younger students, obtain the history from the parent/guardian, if available, or from the student's health record as time permits.

Some of the useful mnemonics for the health history include **SAMPLE** (Table 3), **PQRST** (Table 4), a pain assessment tool, and **CIAMPEDS** (pronounced *see I am peds*), which is outlined below.

**C**hief complaint  
**I**mmunizations, **I**solation  
**A**llergies  
**M**edications  
**P**ast health history  
**E**vents preceding the problem  
**D**iet/elimination  
**S**ymptoms associated with the problem





TABLE 3. SAMPLE HISTORY

	Topic	Questions
<b>S</b>	<b>Symptoms</b> <i>Ask the student to describe current symptoms, particularly pain.</i>	<ul style="list-style-type: none"> <li>▪ What problem brings the student to the health office?</li> <li>▪ How long has the problem persisted?</li> <li>▪ If an injury, how and when did it occur?</li> <li>▪ Is the student having pain, apprehension, or guarding?</li> <li>▪ What is the location, quality, and duration of the pain?</li> <li>▪ Does positioning make the pain better or worse?</li> <li>▪ What strategies make other symptoms better or worse?</li> <li>▪ What is the student's impression of his or her condition?</li> </ul>
<b>A</b>	<b>Allergies</b>	<ul style="list-style-type: none"> <li>▪ Does the student have any known allergies to food, medications, latex or other materials, or environmental elements, such as bee stings?</li> </ul>
<b>M</b>	<b>Medications</b> <i>List medications the student takes regularly, including dosage regimen and time of the last dose.</i>	<ul style="list-style-type: none"> <li>▪ Is the student using any prescription, over-the-counter, home, herbal, or cultural remedies? For what reasons? When was the last dose taken?</li> <li>▪ Did the student take any medications before coming to the health office? What was the result?</li> <li>▪ Has the student used any illicit drugs?</li> </ul>
<b>P</b>	<b>Past health history</b> <i>Note preexisting physical or psychological disabilities, previous trauma, and chronic conditions. Check immunization status, including tetanus prophylaxis.</i>	<ul style="list-style-type: none"> <li>▪ Does the student have a chronic illness? (asthma, diabetes, hemophilia, seizure disorder)</li> <li>▪ Does the student have special health care needs?<sup>a</sup></li> <li>▪ Does the student rely on a medical device? (oxygen, tracheostomy, nebulizer, central venous line, gastrostomy tube)</li> <li>▪ Are immunizations up to date?</li> <li>▪ Is isolation necessary? (pediculosis, varicella exposure, immunosuppression)</li> </ul>
<b>L</b>	<b>Last meal</b> <i>Document when and what the student last ate or drank.</i>	<ul style="list-style-type: none"> <li>▪ Is the student able to eat?</li> <li>▪ When was the last meal?</li> <li>▪ Has there been any nausea, vomiting, diarrhea?</li> <li>▪ Are bowel and bladder function normal?</li> </ul>
<b>E</b>	<b>Events</b> <i>Ask the student to describe events that led up to the illness or injury.</i>	<ul style="list-style-type: none"> <li>▪ When did the problem begin?</li> <li>▪ Were there precipitating factors?</li> <li>▪ If an injury occurred, were there witnesses? What did they report?</li> </ul>

<sup>a</sup>You may need to modify your evaluation of assessment findings for students with special needs, as their baseline findings may vary from accepted averages.

## Pain Assessment

Pain has been referred to as the fifth vital sign because of its significance in assessing pathophysiology. The **PQRST** assessment tool (Table 4) outlines a detailed, systematic interview that covers many clinically significant aspects of pain.



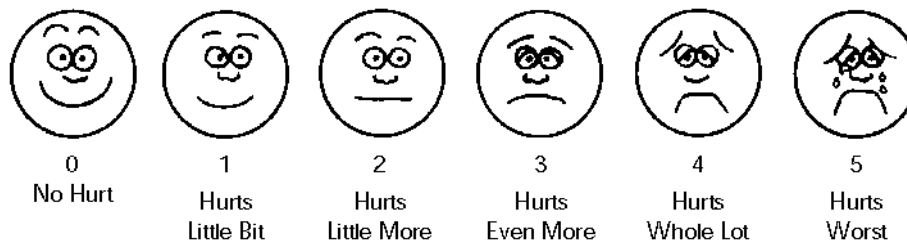
**TABLE 4. PQRST HISTORY FOR PAIN ASSESSMENT**

Assessment Points	
<b>P</b>	<ul style="list-style-type: none"> <li>▪ <b>Problem:</b> How does the student describe the chief complaint?</li> <li>▪ <b>Provoke:</b> What makes the pain worse?</li> <li>▪ <b>Palliate:</b> What makes the pain better?</li> </ul>
<b>Q</b>	<ul style="list-style-type: none"> <li>▪ <b>Quality:</b> What is the quality or character of the pain?</li> </ul>
<b>R</b>	<ul style="list-style-type: none"> <li>▪ <b>Radiate:</b> Does the pain or discomfort seem to travel or move?</li> </ul>
<b>S</b>	<ul style="list-style-type: none"> <li>▪ <b>Severity:</b> Using a developmentally appropriate assessment tool (eg, numeric or FACES<sup>a</sup> scale), how does the student rate the severity of pain or discomfort?</li> <li>▪ <b>Signs:</b> What clinical signs accompany the problem?</li> <li>▪ <b>Symptoms:</b> What subjective problems does the student report?</li> </ul>
<b>T</b>	<ul style="list-style-type: none"> <li>▪ <b>Timing:</b> When did the pain start? Was the onset sudden or gradual?</li> </ul>

<sup>a</sup>FACES indicates Wong-Baker FACES Pain Rating Scale

Severity may be the most challenging aspect of pain to assess, since it is largely a subjective determination. Various assessment tools can help students quantify the severity of their pain; it's important to select one that is suitable to the student's age, cognitive development, and cultural background. For example, school-aged children with average developmental abilities can often rate their pain using a simple numeric scale (*On a scale of 0 to 10, if 0 is no pain at all and 10 is the worst pain you've ever felt, tell me how bad the pain is right now*).

For younger students (aged about 3 years and older), those who are less comfortable with numbers, and those who lack the cognitive skills to think about pain in relative terms, the Wong-Baker FACES Scale may be useful (Figure 3). The scale allows a student to point to a cartoon face with an expression that reflects the student's pain experience.

**FIGURE 3. WONG-BAKER FACES PAIN RATING SCALE**

From Hockenberry MJ, Wilson D: *Wong's Essentials of Pediatric Nursing*. Ed 8. St. Louis, MO: Mosby; 2009. Used with permission. Copyright Mosby.

Pain may be assessed in infants and those with developmental impairment or other impediments to verbal communication by observing behavioral cues, such as facial grimace, and physiologic parameters, such as heart rate.

### Interventions

Comfort measures for pain may include applying a cold pack, stabilizing suspected fractures, or dressing wounds.



## Focused Physical Examination

The focused physical examination may be limited or complete (head-to-toe) depending on the circumstances, the student's health status, and applicable protocols. At minimum, you will measure and document a full set of vital signs. Table 5 provides a mnemonic to help you remember steps you may perform.

**TABLE 5. FOCUSED (FGHI) PHYSICAL EXAMINATION**

	Assessment	Comments
<b>F</b>	Full set of vital signs	Measure and document baseline vital signs, including blood pressure, heart rate, respiratory rate, and temperature. If possible, note weight and blood glucose level as well.
<b>G</b>	Give comfort measures	Perform interventions to alleviate pain, such as applying a cold pack, immobilizing a suspected fracture, or dressing a wound.
<b>H</b>	Head-to-toe assessment <i>Inspect, palpate, auscultate—limited or complete</i>	Perform specialized assessment procedures as indicated, such as cranial nerve assessments, abdominal palpation, or range of motion assessments.
<b>I</b>	Isolate; Injuries; additional Interventions	Assess the potential for communicable disease and isolate as indicated. If you find injuries in varying stages of healing, consider the possibility of child maltreatment. Provide additional interventions according to your findings.

### Baseline vital signs

During the initial assessment, your goal was simply to identify clearly abnormal vital signs suggestive of an emergent condition. At this point, establishing baseline vital signs is essential to both the *triage* determination (discussed in the following section) and ongoing reassessment. It is also an important element in continuity of care if the student is referred for further medical evaluation.

Normal vital signs vary with the student's age (Table 6). As noted earlier, other factors that can affect normal vital signs include certain chronic medical conditions or physical disabilities, medications, environmental conditions, and the student's emotional state.

**TABLE 6. PEDIATRIC VITAL SIGNS BY AGE**

Age	RR	HR	BP
Neonate (birth-30 days)	30-60	100-180	50-90
Infant (1-12 months)	24-50	100-160	60-100
Toddler (1-3 years)	24-40	90-150	80-105
Preschooler (3-5 years)	20-30	80-140	95-105
School-aged (5-12 years)	18-30	65-120	95-120
Adolescent (12 years and older)	12-20	60-100	100-128

BP indicates systolic blood pressure (mm Hg); HR, heart rate; RR, respiratory rate



## Measuring blood pressure

To measure blood pressure accurately, use a cuff that is two-thirds as wide as the student's upper arm from the elbow to the axilla. If you do not have a table of normal blood pressure rates, you can use the following formula to approximate the **lowest** acceptable limit for systolic blood pressure:

$$\text{BP}=70+(2\times\text{age in years})$$

This formula is appropriate for children older than 2 years.

**NOTE** Do not rely solely on blood pressure to indicate the severity of the student's condition. Children can maintain normal blood pressure until decompensated shock is imminent.

## Temperature and other measurements

Note the student's temperature; if possible, include weight and blood glucose levels as well.

### Temperature conversion

Use the following formulas to perform temperature conversions between Fahrenheit and centigrade:

$$\text{To convert centigrade to Fahrenheit: } (1.8\times^{\circ}\text{C})+32=^{\circ}\text{F}$$

$$\text{To convert Fahrenheit to centigrade: } (^{\circ}\text{F}-32)\times 0.556=^{\circ}\text{C}$$

Alternatively, use the information in Table 7.

**TABLE 7. TEMPERATURE EQUIVALENTS**

$^{\circ}\text{C}$	$^{\circ}\text{F}$	$^{\circ}\text{C}$	$^{\circ}\text{F}$
34.2	93.6	38.6	101.5
34.6	94.3	39.0	102.2
35.0	95.0	39.4	102.9
35.4	95.7	39.8	103.6
35.8	96.4	40.2	104.4
36.2	97.2	40.6	105.1
36.6	97.9	41.0	105.8
37.0	98.6	41.4	106.5
37.4	99.3	41.8	107.2
37.8	100.0	42.2	108.0
38.2	100.8	42.6	108.7

C indicates centigrade; F, Fahrenheit

## Orthostatic vital signs

Orthostatic vital signs can help you assess for dehydration or volume depletion. Record the student's blood pressure and heart rate while the student is supine and again 1 minute after the student sits up or stands. If the blood pressure falls



by more than 20 mm Hg, or if the heart rate increases by 20 bpm, orthostasis is present.

### Additional assessments

Inspect, palpate, and auscultate for additional problems as time permits. Look for bleeding, abrasions, wounds, hematomas, or ecchymoses, as well as rashes, petechiae, edema, or pupura.

Reassess the student's activity level (talking or silent; walking or immobile; sitting or supine) and emotional state; compare with your observations from earlier assessments to detect possible trends. Assess orientation to time, place, and person as indicated.

## Triage

### Principles of Triage

**School nursing practice is unpredictable.** There may be times when you have several students as well as staff or visitors waiting in the health office, some reporting for scheduled interventions, others presenting with unexpected problems. You must also respond to episodes of acute illness or injury arising elsewhere around the facility. Consequently, you must be able to determine quickly who needs immediate interventions and who can wait. You will not always treat your students in order of arrival—rather, you must treat them according to the seriousness of the presenting illness or injury, placing those whose condition is most critical ahead of others. *Triage*—derived from the French word meaning *to sort*—provides an objective way to do this.

Through your initial assessment findings, you can “sort” 1 or more students into *emergent*, *urgent*, or *nonurgent* categories according to whether a condition exists that has the potential to threaten life, limb, or vision. Treatment priorities and disposition are associated with each triage category.

If the student's condition changes during ongoing monitoring and reassessment, the triage category may be changed as appropriate.

Remember that it's better to overtriage than to undertriage, particularly if your intuition tells you that there is a significant underlying problem. Experience can also help you decide to upgrade your triage determination. For example, if a student who has a history of severe asthma presents with mild dyspnea, you might immediately consider this student's condition emergent and activate EMS transport, knowing that in the past, the student has developed respiratory distress very quickly.

#### KEY POINT

**Do not delegate tasks related to the initial assessment and triage. Only an experienced registered nurse has the expertise to categorize ill and injured students.**

While you may delegate tasks associated with ongoing health care, do not delegate tasks related to the initial assessment and triage. Only an experienced



registered nurse has the requisite knowledge and expertise to quickly recognize and categorize ill and injured students.

## Performing Triage

Table 8 describes the 3 commonly recognized triage categories (*emergent, urgent, nonurgent*) with examples of problems that fall within each category.

TABLE 8. TRIAGE CATEGORIES AND DISPOSITION

Category	Examples	Disposition
<b>Emergent</b> <i>Student requires immediate medical attention. Condition is acute and has the potential to threaten life, limb, or vision.</i>	<ul style="list-style-type: none"> <li>▪ Cardiopulmonary arrest</li> <li>▪ Altered LOC</li> <li>▪ Burns, severe/major</li> <li>▪ Caustic chemical exposure</li> <li>▪ Childbirth, imminent</li> <li>▪ Head injury, history of loss of consciousness</li> <li>▪ Pain, severe <b>or</b> significant location (eg, chest)</li> <li>▪ Poisoning/drug overdose</li> <li>▪ Respiratory distress, severe, <b>or</b> respiratory failure</li> <li>▪ Shock, any type</li> <li>▪ Spinal cord injury, suspected</li> <li>▪ Status epilepticus <b>or</b> first-time seizure</li> <li>▪ Threatens harm to self or others</li> <li>▪ Trauma, severe <b>or</b> trauma to limb, no distal pulse</li> </ul>	<ul style="list-style-type: none"> <li>▪ Monitor<sup>a</sup> in health office</li> <li>▪ Transport to emergency care facility via ground or air EMS</li> </ul>
<b>Urgent</b> <i>Student requires additional medical intervention within 2 hours. Condition is acute but not severe or life-threatening.</i>	<ul style="list-style-type: none"> <li>▪ Burns, minor</li> <li>▪ Deformity/suspected closed fracture <b>without</b> circulatory compromise</li> <li>▪ Febrile illness (T exceeds 100°F/37.8°C)</li> <li>▪ GI symptoms (nausea, vomiting, diarrhea)</li> <li>▪ Lacerations requiring sutures <b>without</b> excessive blood loss</li> <li>▪ Pain, moderate, after abdominal trauma</li> <li>▪ Seizure, atypical, in student with history of seizures</li> <li>▪ Wheezing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Monitor in health office</li> <li>▪ Transport to emergency care facility via EMS, parent/guardian, or other adult as appropriate</li> </ul>
<b>Nonurgent</b> <i>Student may require referral for routine medical care. Minor or nonacute condition.</i>	<ul style="list-style-type: none"> <li>▪ Essentially well; S/S of mild noncommunicable illness or URI</li> <li>▪ Headache <b>without</b> fever/abnormal findings</li> <li>▪ Injury, minor (abrasions/ecchymoses, muscle sprains/strains)</li> <li>▪ Pain, mild (eg, abdominal or menstrual pain, headache or toothache)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Monitor in health office</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> </ul>

<sup>a</sup>Monitoring should be performed by school nurse. EMS indicates emergency medical services; F, Fahrenheit; GI, gastrointestinal; LOC, level of consciousness; S/S, signs/symptoms; T, temperature; URI, upper respiratory infection

## Ongoing Monitoring and Reassessment

Ongoing monitoring and reassessment are an essential part of nursing care. Your initial triage decision allows you to formulate a nursing diagnosis and develop the plan of care; you may need to adjust the triage category as well as disposition,



however, after you have evaluated the student's response to interventions and determined whether health status has improved or worsened. A student whose condition initially appeared nonurgent may abruptly deteriorate, requiring immediate attention. This means that you must conduct frequent reevaluations and arrange for ongoing monitoring and observation while you are busy elsewhere.

Follow applicable protocols regarding appropriate monitoring.

## Completing the Process

### Documentation and Data Collection

Document your assessment findings and triage category in the student's health record. List interventions and the student's response. Record the final disposition as well. Be sure relevant information, such as permission to treat the student, allergies, medications, immunizations, and contact information, is passed on to prehospital care providers so that they can include it in their report to emergency department personnel.

Collect and analyze data to identify injury and illness patterns so that you can monitor and prevent recurrences.

### Follow-Up

If possible, follow up any student health care incident with the student's primary health care provider, the emergency department physician, the prehospital care professionals, or the parent/guardian. Document the outcome in the student's health record and incident report, as appropriate.

### Prevention

Prevention should be considered the final component in any health care visit. You have an instrumental role in initiating and maintaining measures to minimize the effects of injury or illness and reduce the risk of inaccurate triage decisions, such as

- Establishing written triage guidelines or protocols
- Designating experienced registered nurses to perform triage
- Maintaining knowledge and practice requirements related to triage and decision-making skills
- Knowing which students have emergency care plans on file and reviewing the necessary interventions with others who may have a responsibility for carrying them out.
- Developing and maintaining individualized health care plans and emergency care plans for students with special needs.
- Ensuring that critical information from these care plans is shared with teachers, aides, coaches, and lunchroom or playground monitors as appropriate.





**NOTE** Under the Family Educational Rights and Privacy Act, parent/guardian consent is not required in order to share student health records with school personnel **provided** they have a legitimate educational interest in the student or a need to know the information to protect their welfare before releasing the information.

## Students With Special Needs

Although the pediatric assessment techniques outlined in this chapter are equally applicable to students who have special health care needs, you must adjust these techniques to accommodate the student's developmental age, rather than basing them on chronologic age. Note also that baseline vital signs for a student with a chronic condition may be outside the range of same-age peers who do not have special needs.

As a school nurse, you see the day-to-day variations among your school's students and are often the first to notice changes in a student's condition. With special needs students, it's particularly important to become familiar with the student's baseline status so that you can tell when the student's condition has changed.

Use developmentally appropriate language, gestures, and techniques when communicating with a student who has cognitive impairment or developmental delay. When assessing students who depend on technologic assistive devices, don't allow yourself to be distracted by the specialized equipment they use. Your focus should always be directed toward the student.

## Summary

One of your primary responsibilities as school nurse is to recognize severe illness or injury among the students in your school. It is best to do this using a systematic, consistent assessment schema. Your initial assessment findings give you a basis for determining the urgency of each student's condition through triage. Triage categories allow you to treat students according to acuity of need. Written triage protocols and policies are important in facilitating this process.

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# Protocols

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This section contains protocols that have been developed by Illinois EMSC to guide school nurses as they assess and manage students with emergency health issues in the school setting. Please note that Illinois EMSC has made every effort to ensure that the information presented in this document is accurate and represents current accepted practice in the United States. However, the recommendations in this document are not intended to indicate an exclusive course of treatment or to be applicable in all circumstances. We recommend that you use this document as a guide for developing local school policies and protocols.

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## Systematic Assessment/Immediate Care

Every nursing encounter begins with a systematic assessment. The 5 components of a comprehensive assessment are listed below. Suggested actions should be performed if indicated and in accordance with applicable protocols and available resources. **Take any necessary actions before progressing to the next step of the assessment.**

### NOTE

**Triage determination and EMS activation should occur as soon as the need becomes apparent.**

#### SCENE SAFETY ASSESSMENT

**Call for assistance as indicated before proceeding.**

#### ACROSS-THE-ROOM ASSESSMENT

##### Use Pediatric Assessment Triangle (PAT)

- **Appearance** (mental status ▪ muscle tone/body position ▪ interaction)
- **Breathing** (work of breathing, including nasal flaring, retractions; abnormal airway sounds)
- **Circulation** (visible skin color)

#### INITIAL (ABCDE) ASSESSMENT/IMMEDIATE INTERVENTIONS

- Standard precautions
- C-spine stabilization
- **Airway** (positioning)
- **Breathing** (O<sub>2</sub>, mouth-to-mask)
- **Circulation** (control bleeding ▪ CPR/AED)
- **Disability** (AVPU, pupil check)
- **Exposure** (brief inspection)

#### HISTORY/PAIN ASSESSMENT

- **SAMPLE** (**S**ymptoms ▪ **A**llergies ▪ **M**edications ▪ **P**ast health history ▪ **L**ast food/drink ▪ **E**vents)
- Pain—**PQRST**, numeric or FACES scale (comfort measures)

#### FOCUSED PHYSICAL EXAMINATION

- Full vital signs, temperature, weight, blood glucose
- Limited or complete examination (inspect ▪ auscultate ▪ palpate)

#### TRIAGE (E-U-N)

- **E**mergent (activate EMS)
- **U**rgent (determine need for EMS)
- **N**onurgent (return to class or send home)

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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.**

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- **A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- **A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- **SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- **E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score	
<b>Eye opening</b>	Spontaneous		Spontaneous		<b>4</b>	
	To verbal command		To shout		<b>3</b>	
	To pain		To pain		<b>2</b>	
	No response		No response		<b>1</b>	
<b>Best motor response</b>	Obeys commands		Spontaneous		<b>6</b>	
	Localizes pain		Localizes pain		<b>5</b>	
	Flexion-withdrawal		Flexion-withdrawal		<b>4</b>	
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		<b>3</b>	
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		<b>2</b>	
	No response		No response		<b>1</b>	
	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr		
<b>Best verbal response</b>	Oriented		Appropriate words/phrases	Smiles/coos appropriately		<b>5</b>
	Disoriented/confused		Inappropriate words	Cries, inconsolable		<b>4</b>
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams		<b>3</b>
	Incomprehensible sounds		Grunts	Grunts, agitated, restless		<b>2</b>
	No response		No response	No response		<b>1</b>
<b>Total Score</b>						



# Triage

SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO.**

DETERMINE TRIAGE CATEGORY

**The assessment *findings* allow you to determine a triage category, which dictates subsequent actions. Key findings associated with each triage category are listed below, together with general interventions. Specific actions will vary according to the situation.**

<b>EMERGENT</b>	<b>URGENT</b>	<b>NONURGENT</b>
<p><i>Findings that suggest a potential threat to life or function requiring immediate medical attention include</i></p> <ul style="list-style-type: none"> <li>▪ Cardiopulmonary arrest</li> <li>▪ Altered LOC</li> <li>▪ Burns, severe/major</li> <li>▪ Caustic chemical exposure</li> <li>▪ Childbirth, imminent</li> <li>▪ Head injury with any history of loss of consciousness</li> <li>▪ Pain, severe, <b>or</b> significant location (eg, chest)</li> <li>▪ Poisoning/drug overdose</li> <li>▪ Respiratory distress, severe, <b>or</b> respiratory failure</li> <li>▪ Shock (hypovolemic, anaphylactic, cardiogenic)</li> <li>▪ Spinal cord injury, suspected</li> <li>▪ Status epilepticus <b>or</b> first-time seizure</li> <li>▪ Suicidal behavior</li> <li>▪ Trauma, severe, <b>or</b> trauma to limb, distal pulse absent</li> <li>▪ Violent/homicidal behavior</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Initiate appropriate interventions as per specific protocol or IHP/ECP</li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<p><i>Findings that suggest an acute, severe, but <b>non-life-threatening</b> condition requiring additional medical intervention within 2 hours include</i></p> <ul style="list-style-type: none"> <li>▪ Burns, minor</li> <li>▪ Deformity/suspected closed fracture <b>without</b> circulatory compromise</li> <li>▪ Fever exceeding 100°F/37.8°C</li> <li>▪ GI symptoms, persistent (nausea, vomiting, diarrhea)</li> <li>▪ Lacerations requiring sutures <b>without</b> excessive blood loss</li> <li>▪ Pain, moderate, following abdominal trauma</li> <li>▪ Seizure, atypical, in a student with a history of seizures</li> <li>▪ Wheezing</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs as indicated</li> <li>▪ Determine need for EMS</li> <li>▪ Observe student closely</li> <li>▪ Initiate appropriate interventions as per specific protocol or IHP/ECP</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<p><i>Findings that suggest a nonacute condition that is not severe (but may require referral for routine medical care) include</i></p> <ul style="list-style-type: none"> <li>▪ Essentially well with S/S of mild noncommunicable illness or URI</li> <li>▪ Headache <b>without</b> fever or other abnormal findings</li> <li>▪ Injury, minor (abrasions, ecchymoses, sprains/strains)</li> <li>▪ Pain, mild (eg, abdominal or menstrual pain, headache or toothache), <b>without</b> fever or other abnormal findings</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Initiate appropriate interventions or administer medications as per specific protocol or IHP/ECP</li> <li>▪ Observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE:** Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- Appearance
- Breathing
- Circulation

#### Initial assessment

- Standard precautions
- C-spine stabilization
- Airway
- Breathing
- Circulation
- Disability<sup>a</sup>
- Exposure

#### History/pain assessment

- SAMPLE history
- PQRST/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect
- auscultate
- palpate

#### Triage

- Emergent
- Urgent
- Nonurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (AVPU):
  - A Alert
  - V Responds to Verbal stimulus
  - P Responds to Painful stimulus
  - U Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score
<b>Eye opening</b>	Spontaneous		Spontaneous		4
	To verbal command		To shout		3
	To pain		To pain		2
	No response		No response		1
<b>Best motor response</b>	Obeys commands		Spontaneous		6
	Localizes pain		Localizes pain		5
	Flexion-withdrawal		Flexion-withdrawal		4
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2
	No response		No response		1
	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr	
<b>Best verbal response</b>	Oriented	Appropriate words/phrases	Smiles/coos appropriately	5	
	Disoriented/confused	Inappropriate words	Cries, inconsolable	4	
	Inappropriate words	Persistent cries/screams	Persistent inappropriate cries/screams	3	
	Incomprehensible sounds	Grunts	Grunts, agitated, restless	2	
	No response	No response	No response	1	
<b>Total Score</b>					





## Abdominal Pain

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR ABDOMINAL PAIN

- Focused abdominal assessment
- Time of last bowel movement
- Urinary symptoms
- Events preceding episode, including trauma
- Menstrual history and possibility of pregnancy
- History/pattern of previous occurrences

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Capillary refill time exceeds 2 sec</li> <li>▪ Orthostatic vital signs<sup>a</sup></li> <li>▪ Change in mental status, LOC</li> <li>▪ Decreased or absent bowel sounds</li> <li>▪ Abdominal/GU trauma (see <i>Trauma</i> protocol)</li> <li>▪ Abdominal distention, rigidity, or guarding</li> <li>▪ Bluish discoloration of flank or periumbilical area (Grey Turner sign)</li> <li>▪ Severe abdominal pain</li> <li>▪ Imminent childbirth (see <i>Obstetric Emergencies</i> protocol)</li> <li>▪ Pregnant with vaginal bleeding</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Place student supine</li> <li>▪ Give nothing by mouth</li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><i>Stable vital signs with</i></p> <ul style="list-style-type: none"> <li>▪ Moderate abdominal pain or dysuria</li> <li>▪ Nausea/vomiting or significant diarrhea</li> <li>▪ Significant pain with fever</li> <li>▪ Mucus or frank blood in stool; tarry stools</li> <li>▪ Abnormal vaginal bleeding or discharge without pregnancy</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS</li> <li>▪ Observe student closely</li> <li>▪ Give nothing by mouth</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><i>Stable vital signs with</i></p> <ul style="list-style-type: none"> <li>▪ Mild or intermittent abdominal pain/cramps</li> <li>▪ Onset related to menses</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ If recurrent abdominal pain (RAP) has been diagnosed, allow student to rest in health office</li> <li>▪ Observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Refer to medical care or school support services as indicated for frequent complaints</li> <li>▪ Follow up</li> </ul>

<sup>a</sup>**Orthostatic vital signs**

Assess BP and HR while student is supine. Have student sit up or stand and reassess 1 min later. If BP decreases by more than 20 mm Hg or HR increases by 20 bpm, orthostasis is present.

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## Tools for Assessing Students

**SYSTEMATIC ASSESSMENT**

*NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.*

**Scene safety assessment**

- Call for assistance as indicated

**Across-the-room assessment**

Use Pediatric Assessment Triangle (PAT)

- A**ppearance ▪ **B**reathing ▪ **C**irculation

**Initial assessment**

- Standard precautions ▪ C-spine stabilization
- A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

**History/pain assessment**

- SAMPLE** history ▪ **PQRST**/other pain assessment

**Focused physical examination**

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

**Triage**

- E**mergent ▪ **U**rgent ▪ **N**onurgent

<sup>a</sup>**Disability Assessment**

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

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Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

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- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

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<b>Eye opening</b>	Spontaneous		Spontaneous		4		
	To verbal command		To shout		3		
	To pain		To pain		2		
	No response		No response		1		
<b>Best motor response</b>	Obeys commands		Spontaneous		6		
	Localizes pain		Localizes pain		5		
	Flexion-withdrawal		Flexion-withdrawal		4		
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3		
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2		
	No response		No response		1		
<b>Best verbal response</b>	<b>Older Than 5 Yr</b>		<b>2-5 Yr</b>		<b>Younger than 2 Yr</b>		
	Oriented		Appropriate words/phrases		Smiles/coos appropriately		5
	Disoriented/confused		Inappropriate words		Cries, inconsolable		4
	Inappropriate words		Persistent cries/screams		Persistent inappropriate cries/screams		3
	Incomprehensible sounds		Grunts		Grunts, agitated, restless		2
No response		No response		No response		1	
<b>Total Score</b>							



## Anaphylaxis/Allergic Reaction

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR ANAPHYLAXIS

- **Respiratory assessment**
- Focused assessment of skin findings
- History of systemic allergic reaction
- History of food allergy
- Events preceding reaction, such as a bite/sting

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ <b>S/S of cardiopulmonary compromise</b> (see reverse)</li> <li>▪ Airway compromise</li> <li>▪ Change in mental status, LOC</li> <li>▪ Cyanosis at mouth and lips</li> <li>▪ S/S of severe respiratory distress (wheezing, dyspnea)</li> <li>▪ Signs of shock/hypotension</li> <li>▪ History of anaphylaxis</li> <li>▪ Edema of face, lips, eyes, tongue</li> <li>▪ Generalized hives involving large area</li> <li>▪ Diaphoresis</li> <li>▪ C/o tightness in throat or chest</li> <li>▪ C/o apprehension, weakness</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Administer prescribed Epi-Pen/Epi-Pen Jr <b>if available</b></li> <li>▪ Repeat Epi-Pen/Epi-Pen Jr in 10 min if no response</li> <li>▪ Initiate CPR if necessary</li> <li>▪ For severe respiratory distress, administer prescribed bronchodilator</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ S/S of <b>mild</b> systemic reaction; eg, localized hives, abdominal cramps, nausea, vomiting</li> <li>▪ Edema of extremities</li> <li>▪ Persistent coughing</li> <li>▪ Tingling, itching of face, ears, nose</li> <li>▪ History of allergy</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Observe student closely</li> <li>▪ Administer prescribed Epi-Pen/Epi-Pen Jr <b>if available</b> and activate EMS</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Local reaction <b>only</b></li> <li>▪ Responsive to medications</li> <li>▪ Nasal congestion</li> <li>▪ Persistent sneezing</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Apply cold pack to site</li> <li>▪ Observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

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**Across-the-room assessment**

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**Initial assessment**

- Standard precautions ▪ C-spine stabilization
- A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

**History/pain assessment**

- SAMPLE** history ▪ **PQRST**/other pain assessment

**Focused physical examination**

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

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	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2
	No response		No response		1
<b>Best verbal response</b>	<b>Older Than 5 Yr</b>		<b>2-5 Yr</b>		<b>Younger than 2 Yr</b>
	Oriented	Appropriate words/phrases	Smiles/coos appropriately		5
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	Inappropriate words	Persistent cries/screams	Persistent inappropriate cries/screams		3
	Incomprehensible sounds	Grunts	Grunts, agitated, restless		2
No response	No response	No response		1	
					<b>Total Score</b>



## Asthma Attack (Acute)/Reactive Airway Disease

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR ACUTE ASTHMA ATTACKS

- Airway inspection to R/O obstruction due to infection or foreign body aspiration
- Respiratory assessment
- Skin assessment

### IMMEDIATE INTERVENTIONS

**Even before you determine triage category, perform the following actions as indicated**

- Help student into a position of comfort
- Administer prescribed bronchodilator or other medication as directed
- Perform peak flow assessment if possible
- **Note:** Use spacer or holding chamber with MDI/nebulizer, if available
- **Note:** Obtain peak expiratory flow reading before administering bronchodilator and again 20 min later (or per ECP orders)

### TRIAGE CATEGORY/ADDITIONAL INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

<p style="text-align: center;"><b>EMERGENT</b></p> <ul style="list-style-type: none"> <li>▪ S/S of severe asthma (see reverse)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Prepare to ventilate if necessary</li> <li>▪ Activate EMS if S/S are not relieved by medication <b>or</b> if medication is not available</li> <li>▪ Administer high-flow O<sub>2</sub> if available</li> <li>▪ Repeat prescribed bronchodilator/ other medications</li> <li>▪ Directly/continuously observe student</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><b>URGENT</b></p> <ul style="list-style-type: none"> <li>▪ S/S of moderate asthma (see reverse)</li> <li>▪ Cannot tolerate normal activity</li> <li>▪ No improvement within 15–30 min of bronchodilator administration</li> <li>▪ Bronchodilator unavailable</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS</li> <li>▪ Administer high-flow O<sub>2</sub> if available</li> <li>▪ Repeat prescribed bronchodilator/other medications</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><b>NONURGENT</b></p> <ul style="list-style-type: none"> <li>▪ S/S of mild asthma (see reverse)</li> <li>▪ Symptoms respond to bronchodilator</li> <li>▪ Student is able to maintain normal level of activity</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Repeat prescribed bronchodilator/other medications</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Monitor student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Assess need for parent/guardian–student asthma education</li> <li>▪ Follow up</li> </ul>
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## Tools for Assessing Students

### ASSESSMENT FINDINGS IN ASTHMA

Assessment	Mild Asthma	Moderate Asthma	Severe Asthma
PEFR	70%–90% of predicted or personal best	50%–70% of predicted or personal best	less than 50% of predicted or personal best
RR	Less than 30% above mean	30%–50% above mean	More than 50% above mean
LOC	Normal	Normal	Normal or decreased
Dyspnea	Absent or mild; able to speak in complete sentences	Moderate; speaks in phrases or partial sentences	Severe; speaks only in single words or short phrases
Accessory muscle use	None <b>or</b> mild intercostal retractions	Moderate intercostal retractions, suprasternal retractions	Severe intercostal retractions, suprasternal retractions, nasal flaring during inspiration
Color	Normal	Pallid	Pallid or cyanotic
Auscultation	End-expiratory wheeze only	Wheeze throughout expiration and inspiration	Decreasing or absent breath sounds
O <sub>2</sub> saturation	Exceeds 95%	90%–95%	Less than 90%

LOC indicates level of consciousness; O<sub>2</sub>, oxygen; PEFR, peak expiratory flow rate; RR, respiratory rate

### SYSTEMATIC ASSESSMENT

**NOTE:** Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- **A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- **A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- **SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- **E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)



## Bites and Stings

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR BITES AND STINGS

- Time bite/sting occurred
- Location of bite/sting on body
  - Type of bite/sting
- Number of bites/stings
  - Intensity of pain
- Previous exposure/allergic reaction to same type of bite/sting
- Wound characteristics (erythema, edema, ecchymoses, drainage, size/depth)
- Inspection for foreign body (stinger, tooth, tick)

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

<p style="text-align: center;"><b>EMERGENT</b></p> <ul style="list-style-type: none"> <li>▪ S/S of anaphylaxis <b>or</b> history of anaphylactic reaction (see <i>Anaphylaxis</i> protocol)</li> <li>▪ S/S of respiratory distress</li> <li>▪ Hypotension</li> <li>▪ Cardiac arrest</li> <li>▪ Loss of consciousness</li> <li>▪ Known exposure to toxin (see <i>Toxic Exposure</i> protocol)</li> <li>▪ Severe pain</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Perform CPR as appropriate</li> <li>▪ Administer IM epinephrine as per ECP</li> <li>▪ Directly/continuously observe student</li> <li>▪ Report animal bites to appropriate local official</li> <li>▪ Contact PCC as appropriate (800-222-1222)</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><b>URGENT</b></p> <ul style="list-style-type: none"> <li>▪ S/S of mild systemic reaction with wheezing, progressive pain/edema <b>but</b> normal vital signs (see <i>Anaphylaxis</i> protocol)</li> <li>▪ Deep puncture wounds</li> <li>▪ Moderate pain</li> <li>▪ Lacerations requiring sutures (see <i>Lacerations/Abrasions</i> protocol)</li> <li>▪ Nausea/vomiting</li> <li>▪ Human bite with broken skin</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS</li> <li>▪ Wash lacerations with soap and water; irrigate as indicated</li> <li>▪ Observe student closely</li> <li>▪ Report animal bites to appropriate local official</li> <li>▪ Refer all incidents involving human bites to ED</li> <li>▪ Contact PCC as appropriate (800-222-1222)</li> <li>▪ Contact parent/guardian to transport to medical care or home</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><b>NONURGENT</b></p> <ul style="list-style-type: none"> <li>▪ Mild localized allergic reaction without systemic/respiratory S/S</li> <li>▪ Mild pain</li> <li>▪ Mild pruritus</li> <li>▪ Stinger/tick present</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <p style="text-align: center;"><b>Stinger</b></p> <ul style="list-style-type: none"> <li>▪ Remove stinger by scraping with stiff cardboard/credit card; <b>do not squeeze</b></li> <li>▪ Apply cold pack</li> <li>▪ Observe student for 20 min before returning to class</li> </ul> <p style="text-align: center;"><b>Tick</b></p> <ul style="list-style-type: none"> <li>▪ Grasp tick with fine-point tweezers as close to skin as possible</li> <li>▪ Pull firmly</li> <li>▪ Wash bite area and hands with soap and water</li> </ul> <p style="text-align: center;"><b>In All Cases</b></p> <ul style="list-style-type: none"> <li>▪ Observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>
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#### First Aid Don'ts

- **Do not** apply a tourniquet, as it can lead to ischemia
- **Do not** incise wound or apply suction, as these measures are ineffective and potentially dangerous

#### NOTE

**Refer student for tetanus booster if it has been 5 years or more since the last vaccination. Tetanus booster is recommended every 10 years.**

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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.**

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- **A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- **A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- **SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- **E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score	
<b>Eye opening</b>	Spontaneous		Spontaneous		<b>4</b>	
	To verbal command		To shout		<b>3</b>	
	To pain		To pain		<b>2</b>	
	No response		No response		<b>1</b>	
<b>Best motor response</b>	Obeys commands		Spontaneous		<b>6</b>	
	Localizes pain		Localizes pain		<b>5</b>	
	Flexion-withdrawal		Flexion-withdrawal		<b>4</b>	
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		<b>3</b>	
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		<b>2</b>	
	No response		No response		<b>1</b>	
	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr		
<b>Best verbal response</b>	Oriented		Appropriate words/phrases	Smiles/coos appropriately		<b>5</b>
	Disoriented/confused		Inappropriate words	Cries, inconsolable		<b>4</b>
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams		<b>3</b>
	Incomprehensible sounds		Grunts	Grunts, agitated, restless		<b>2</b>
	No response		No response	No response		<b>1</b>
<b>Total Score</b>						





# Burns

## SYSTEMATIC ASSESSMENT

Begin the 5 components of assessment (see *Assessment* protocol), performing interventions AS YOU GO

### KEY ASSESSMENT POINTS FOR BURN INJURIES

- Scene safety (eg, live electrical wire)
  - Burn characteristics (see reverse)
- Duration of contact with burn source
- Student's age, weight, and general health status
- Associated injuries
- Pediatric GCS score

## IMMEDIATE INTERVENTIONS

Even before you determine triage category, perform the following actions as indicated

- Remove student from burn source (eg, heat/electricity)
  - Remove jewelry, rings, constricting clothing  
(Do not remove clothing that has adhered to skin!)
- Begin irrigation of chemical burns with cool water
- Cool thermal burns if less than 20% BSA is involved  
**NOTE:** Protect student from hypothermia

## TRIAGE CATEGORY/ADDITIONAL INTERVENTIONS

Determine triage category and activate EMS AS SOON AS the need becomes apparent!

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Apnea or pulselessness</li> <li>▪ Full-thickness burn (tough, brownish surface)</li> <li>▪ Deep partial-thickness burn (charred/white)</li> <li>▪ Burns involving face, hands or feet, eyes or ears, genitalia (see <i>Eye</i> or <i>Ear Emergencies</i> protocols)</li> <li>▪ Electrical burns</li> <li>▪ S/S of inhalation injury (singled nasal hair, carbonaceous sputum) or other complicating injuries</li> <li>▪ Altered LOC</li> <li>▪ Respiratory distress (see <i>Respiratory Distress</i> protocol)</li> <li>▪ Suspected child maltreatment (see <i>Child Maltreatment</i> protocol <b>after</b> providing burn care)</li> <li>▪ Severe pain</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> </ul> <p style="text-align: center;"><b>Electrical burns</b></p> <ul style="list-style-type: none"> <li>▪ Safely remove student from burn source</li> <li>▪ Initiate CPR as needed/have AED ready</li> <li>▪ Inspect for entrance and exit wounds</li> </ul> <p style="text-align: center;"><b>Chemical burns</b></p> <ul style="list-style-type: none"> <li>▪ Continue copious irrigation of chemical burns with cool running water for at least 20 min</li> <li>▪ Consider contacting PCC (800-222-1222)</li> <li>▪ Send burn agent and MSDS to ED with student</li> <li>▪ <b>Do not</b> apply cold packs</li> </ul> <p style="text-align: center;"><b>Thermal burns</b></p> <ul style="list-style-type: none"> <li>▪ Cover with dry, sterile dressings or clean sheet</li> </ul> <p style="text-align: center;"><b>In all cases</b></p> <ul style="list-style-type: none"> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Superficial partial-thickness burn without complicating factors</li> <li>▪ Moderate pain</li> <li>▪ Erythema/edema, wet/oozing blisters</li> <li>▪ Too large to cover with adhesive bandage</li> <li>▪ Signs of associated infection</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS</li> <li>▪ Flush copiously with cool running water</li> <li>▪ If unable to immerse, apply clean, wet, cool cloth</li> <li>▪ <b>Do not apply cold packs</b></li> <li>▪ Do not break blisters</li> <li>▪ Bandage loosely</li> <li>▪ Observe student closely</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Superficial burn (eg, sunburn)</li> <li>▪ Minor erythema</li> <li>▪ Local, mild pain</li> <li>▪ Student is alert</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Immerse area in cool water 2–5 min</li> <li>▪ Apply tepid cloths</li> <li>▪ Bandage loosely</li> <li>▪ Observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

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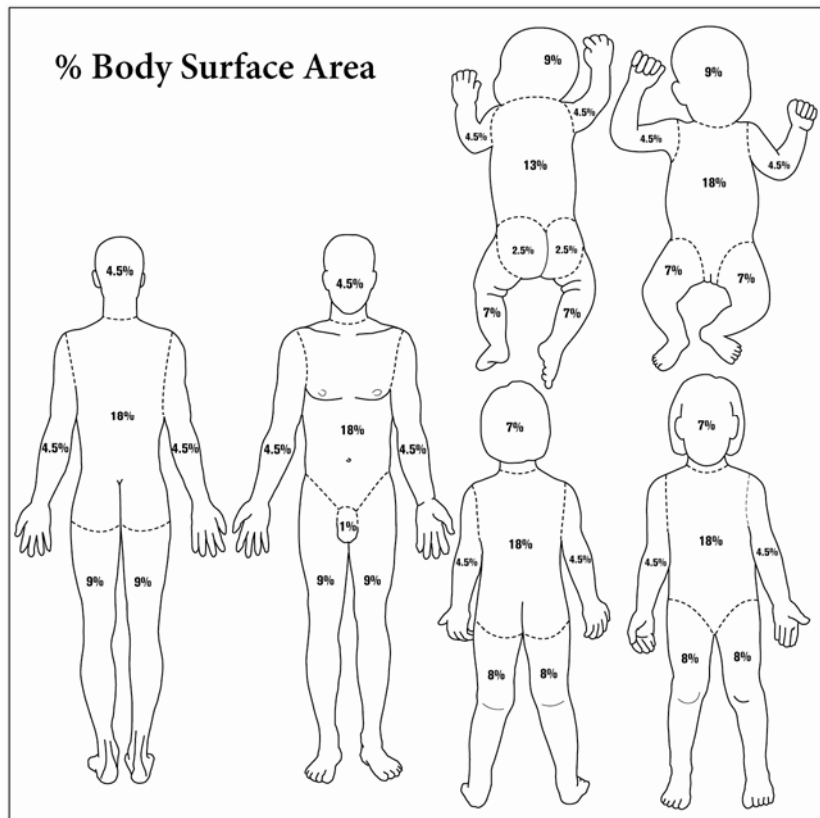


## Burn Assessment

The depth, extent, and location of a burn provide a consistent basis for conveying information about a burn injury to EMS and other health care providers. The following parameters are used to describe depth:

- A **superficial** burn involves only the epidermis. It is characterized by erythema and local pain.
- A **superficial partial-thickness** burn involves both the epidermis and the corium. This type of burn generally produces erythema and blisters.
- A **deep partial-thickness** burn may appear white and dry, with locally reduced sensitivity to touch and pain.
- A **full-thickness** burn has a tough brownish surface and a hard eschar. The area will be locally insensitive to touch or pain. This type of burn will not heal without intervention.

Extent is described as a percentage of the body surface area (%BSA). A quick way to determine %BSA for small or irregular burns is to use the student's hand (including the palm and fingers) as a reference, since this is roughly equal to 1% of the student's total body surface area. The figures below illustrate %BSA by anatomic area for an infant, child, and adult.



## Chest Pain

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR CHEST PAIN

##### Consider etiology

- Cardiac
- Trauma
- Respiratory
- Psychosocial stress
- Musculoskeletal

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

<b>EMERGENT</b>	<b>URGENT</b>	<b>NONURGENT</b>
<ul style="list-style-type: none"> <li>▪ Severe chest pain</li> <li>▪ Bradycardia/tachycardia</li> <li>▪ Cyanosis of lips and nail beds</li> <li>▪ Decreased LOC</li> <li>▪ Palpitations</li> <li>▪ Dyspnea</li> <li>▪ Peripheral pulses weak/thready/absent</li> <li>▪ Diaphoresis; clammy, cool skin</li> <li>▪ Restlessness</li> <li>▪ Hypotension</li> <li>▪ Nausea</li> <li>▪ Weakness</li> <li>▪ Capillary refill exceeds 2 sec</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Have AED readily available</li> <li>▪ Maintain position of comfort</li> <li>▪ Directly/continuously observe student</li> <li>▪ Reassess vital signs every 5 min</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Moderate, persistent chest pain</li> <li>▪ Anxiety</li> <li>▪ Stable vital signs</li> <li>▪ No history of                             <ul style="list-style-type: none"> <li>• recent chest trauma</li> <li>• recent asthma attack</li> <li>• loss of consciousness</li> </ul> </li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Determine need for EMS</li> <li>▪ Maintain position of comfort</li> <li>▪ Observe student closely</li> <li>▪ Reassess vital signs</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mild chest pain</li> <li>▪ Normal vital signs</li> <li>▪ No history of                             <ul style="list-style-type: none"> <li>• recent chest trauma</li> <li>• recent asthma attack</li> <li>• loss of consciousness</li> </ul> </li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Maintain position of comfort</li> <li>▪ Monitor closely</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

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## Tools for Assessing Students

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**Across-the-room assessment**

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**Initial assessment**

- Standard precautions ▪ C-spine stabilization
- A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

**History/pain assessment**

- SAMPLE** history ▪ **PQRST**/other pain assessment

**Focused physical examination**

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

**Triage**

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<sup>a</sup>**Disability Assessment**

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  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

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**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

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- Decreasing consciousness
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	1 Yr or Older		Younger than 1 Yr		Score
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	To verbal command		To shout		<b>3</b>
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<b>Best motor response</b>	Obeys commands		Spontaneous		<b>6</b>
	Localizes pain		Localizes pain		<b>5</b>
	Flexion-withdrawal		Flexion-withdrawal		<b>4</b>
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		<b>3</b>
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		<b>2</b>
	No response		No response		<b>1</b>
<b>Best verbal response</b>	<b>Older Than 5 Yr</b>		<b>2-5 Yr</b>		<b>Younger than 2 Yr</b>
	Oriented	Appropriate words/phrases	Smiles/coos appropriately		<b>5</b>
	Disoriented/confused	Inappropriate words	Cries, inconsolable		<b>4</b>
	Inappropriate words	Persistent cries/screams	Persistent inappropriate cries/screams		<b>3</b>
	Incomprehensible sounds	Grunts	Grunts, agitated, restless		<b>2</b>
No response	No response	No response		<b>1</b>	
					<b>Total Score</b>



## Chest Trauma

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO  
Stabilize c-spine if head/spinal injury is suspected!**

#### KEY ASSESSMENT POINTS FOR CHEST TRAUMA

- Respiratory assessment
- Chest wall inspection for symmetry, wounds, ecchymoses

### IMMEDIATE INTERVENTIONS

**Even before you determine triage category, perform the following actions as indicated**

- If student is apneic, perform rescue breathing using mouth-to-mask
  - If pulseless, initiate CPR; consider AED
- Apply clean dressing to open chest wounds (occlude on 3 sides only)
- Apply direct pressure for profuse hemorrhage

### TRiage CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ S/S of respiratory distress</li> <li>▪ Open chest wound</li> <li>▪ Crush injury</li> <li>▪ Uncontrollable hemorrhage</li> <li>▪ Muffled heart sounds</li> <li>▪ S/S of pneumothorax or cardiac tamponade:                             <ul style="list-style-type: none"> <li>• Apprehension</li> <li>• Rapid/shallow respiration</li> <li>• Painful respiration</li> <li>• Jugular vein distension</li> <li>• Cyanosis</li> <li>• Muffled heart sounds</li> <li>• Hypotension (late/ominous sign)</li> </ul> </li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Maintain spinal stabilization</li> <li>▪ Cover open chest wounds (occlude on 3 sides only)</li> <li>▪ Elevate head and shoulders 30° <b>unless</b> neck injury is suspected</li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Closed chest injury <b>without</b> respiratory distress</li> <li>▪ S/S of closed rib fracture (shallow/painful but unimpaired respiration)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Determine need for EMS</li> <li>▪ Monitor respiratory/cardiac status</li> <li>▪ Observe student closely</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stable vital signs</li> <li>▪ Ecchymoses</li> <li>▪ No S/S of rib fracture</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Apply cold packs as appropriate</li> <li>▪ Observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

#### NOTE

**Pneumothorax/cardiac tamponade may develop slowly during a 24- to 48-hour period following chest trauma, making reassessment crucial.**

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## Tools for Assessing Students

**SYSTEMATIC ASSESSMENT**

*NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.*

**Scene safety assessment**

- Call for assistance as indicated

**Across-the-room assessment**

Use Pediatric Assessment Triangle (PAT)

- A**ppearance ▪ **B**reathing ▪ **C**irculation

**Initial assessment**

- Standard precautions ▪ C-spine stabilization
- A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

**History/pain assessment**

- SAMPLE** history ▪ **PQRST**/other pain assessment

**Focused physical examination**

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

**Triage**

- E**mergent ▪ **U**rgent ▪ **N**onurgent

<sup>a</sup>**Disability Assessment**

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score
<b>Eye opening</b>	Spontaneous		Spontaneous		4
	To verbal command		To shout		3
	To pain		To pain		2
	No response		No response		1
<b>Best motor response</b>	Obeys commands		Spontaneous		6
	Localizes pain		Localizes pain		5
	Flexion-withdrawal		Flexion-withdrawal		4
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2
	No response		No response		1
<b>Best verbal response</b>	<b>Older Than 5 Yr</b>		<b>2-5 Yr</b>		
	Oriented		Appropriate words/phrases	Smiles/coos appropriately	5
	Disoriented/confused		Inappropriate words	Cries, inconsolable	4
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams	3
	Incomprehensible sounds		Grunts	Grunts, agitated, restless	2
No response		No response	No response	1	
<b>Total Score</b>					



## Child Maltreatment, Suspected

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see *Assessment protocol*), performing interventions AS YOU GO**

### KEY ASSESSMENT POINTS FOR SUSPECTED CHILD MALTREATMENT

Indications of neglect ▪ Indications of abuse (See reverse)

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Multiple new suspicious injuries (see <i>Trauma</i> protocol)</li> <li>▪ History of chronic life-threatening illness without appropriate medical treatment</li> </ul>	<ul style="list-style-type: none"> <li>▪ New injuries <b>and</b> history of suspicious injuries (see <i>Trauma</i> protocol)</li> <li>▪ Appears inadequately fed, clothed, or sheltered</li> <li>▪ Inadequate medical care</li> </ul>	<ul style="list-style-type: none"> <li>▪ Student reports abandonment by parent/guardian</li> <li>▪ Student reports maltreatment</li> </ul>
<p style="text-align: center;"><b>INTERVENTIONS</b></p>	<p style="text-align: center;"><b>INTERVENTIONS</b></p>	<p style="text-align: center;"><b>INTERVENTIONS</b></p>
<ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Treat injuries</li> <li>▪ Provide emotional support</li> <li>▪ Directly/continuously observe student</li> <li>▪ <b>Report suspicions to DCFS: 800-25-ABUSE (22873)</b></li> <li>▪ Notify crisis response team</li> <li>▪ Notify school administrator</li> <li>▪ <b>Document all findings</b></li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Treat injuries</li> <li>▪ Provide emotional support</li> <li>▪ Observe student closely</li> <li>▪ <b>Report suspicions to DCFS: 800-25-ABUSE (22873)</b></li> <li>▪ Notify crisis response team as appropriate</li> <li>▪ <b>Document all findings</b></li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Provide emotional support</li> <li>▪ <b>Report suspicions to DCFS: 800-25-ABUSE (22873)</b></li> <li>▪ Notify crisis response team as appropriate</li> <li>▪ Observe student</li> <li>▪ <b>Document all findings</b></li> <li>▪ Follow up</li> </ul>

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## Indications of Child Maltreatment

You are required by law to report any suspicion of child maltreatment (abuse or neglect) to the appropriate agency in your state. In Illinois, you can reach the Child Abuse Hotline maintained by the Department of Children and Family Services by calling **800-25-ABUSE (22873)**. The law provides immunity for mandated reporting.

### INDICATORS OF ABUSE

The following findings should increase your suspicion of child abuse:

- The reported history of injury is inconsistent with the physical examination findings.
- Details of the reported history change from one telling to the next.
- There was a prolonged delay between the time of injury and the time medical assistance was sought.
- The child has a history of repeated trauma.
- The parent/guardian responds to questions inappropriately or does not comply with medical advice.

#### Suspicious injuries include

- Injuries involving soft tissue of the face, neck, abdomen, or similar areas
- Injuries involving areas that are normally shielded, including the back and chest
- Fractures of long bones in children younger than 3 years
- Old scars or injuries in different stages of healing
- Injuries with an appearance suggesting deliberate infliction, such as human bite marks, cigarette burns, rope marks, or the imprint of a belt or other object
- Trauma affecting the genital or perianal area
- Sharply demarcated burns in unusual areas
- Scald patterns that appear to involve dipping the area in hot water, such as burns to the hands, feet, or buttocks

### INDICATORS OF NEGLECT

The following findings should increase your suspicion of child neglect:

- Unsafe conditions are evident in the home environment (eg, weapons within reach, open windows without screens or window guards, perilously unsanitary conditions).
- The parent/guardian has not provided for medical treatment, refuses to permit medical treatment, or fails to seek necessary and timely medical care for a child who has an acute or chronic life-threatening illness.
- A child younger than 10 years has been left unattended or unsupervised. (Although some situations permit a parent/guardian to leave a young child alone without endangerment, you cannot make this determination.)
- The child appears to be abandoned.
- The parent/guardian appears to be incapacitated due to intoxication, disabling psychiatric problems, debilitating illness, or similar impairment, and cannot adequately care for the child.
- The child appears to be malnourished (seriously underweight, emaciated, or dehydrated), inadequately clothed, or inadequately sheltered.
- The child is found to be intoxicated or under the influence of an illicit substance.

**All instances of suspected child maltreatment must be reported to the DCFS for investigation.**





## Cold-related Injuries (Hypothermia/Frostbite)

### GENERAL GUIDELINES

- Hypothermia: rewarm slowly
- Frostbite: rewarm quickly
- Do not rub affected area
- When rewarming, use warm water, **never hot**

Educate students regarding susceptibility to hypothermic injury, need for precautions

### FROSTBITE CATEGORIES<sup>a</sup>

#### *Frostnip*

- Blanched, white skin, cold to touch

#### *Superficial frostbite*

- Firm, waxy skin, softer tissue underneath
- Blisters develop in 24 to 48 hours

#### *Deep frostbite*

- Mottled or gray-blue skin, firm to touch
- Severity not apparent until frostbitten area is rewarmed
- Sensory: cold; pruritus or paresthesia
- Necrosis develops over time

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

### KEY ASSESSMENT POINTS FOR COLD-RELATED INJURIES

- Skin assessment
- Events preceding episode
- Duration of exposure
- Focused physical examination of extremities

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Altered LOC</li> <li>▪ Cyanosis</li> <li>▪ Slow/shallow respiration</li> <li>▪ Weak, thready pulses, no pulses, or bradycardia</li> <li>▪ Hypotension</li> <li>▪ Extremities edematous and discolored</li> <li>▪ No shivering (severe hypothermia)</li> <li>▪ Slurred speech</li> <li>▪ Abnormally low body temperature</li> <li>▪ S/S of deep frostbite<sup>a</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Normal LOC or drowsy</li> <li>▪ Shivering (mild hypothermia)</li> <li>▪ S/S of superficial frostbite or frostnip<sup>a</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Alert</li> <li>▪ Slight shivering</li> <li>▪ Exposed skin feels cold</li> <li>▪ No signs of frostbite or frostnip<sup>a</sup></li> </ul>
<p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Activate EMS</li> <li>▪ Remove student's wet clothing</li> <li>▪ Keep student warm and completely covered</li> <li>▪ Assess vital signs for <b>1 full minute</b></li> <li>▪ If pulseless, initiate CPR</li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Remove wet clothing and keep student warm</li> <li>▪ Determine need for EMS</li> <li>▪ Observe student closely</li> <li>▪ If alert, give sips of warm liquid</li> <li>▪ Warm area with warm water</li> <li>▪ Reinforce need for precautions when exposed to cold</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Remove wet clothing and replace with dry coverings</li> <li>▪ If student is alert, give sips of warm liquid</li> <li>▪ Warm cold skin with warm water</li> <li>▪ Observe student</li> <li>▪ Reinforce need for precautions when exposed to cold</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.**

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- **A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- **A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- **SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- **E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score	
<b>Eye opening</b>	Spontaneous		Spontaneous		<b>4</b>	
	To verbal command		To shout		<b>3</b>	
	To pain		To pain		<b>2</b>	
	No response		No response		<b>1</b>	
<b>Best motor response</b>	Obeys commands		Spontaneous		<b>6</b>	
	Localizes pain		Localizes pain		<b>5</b>	
	Flexion-withdrawal		Flexion-withdrawal		<b>4</b>	
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		<b>3</b>	
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		<b>2</b>	
	No response		No response		<b>1</b>	
	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr		
<b>Best verbal response</b>	Oriented		Appropriate words/phrases	Smiles/coos appropriately		<b>5</b>
	Disoriented/confused		Inappropriate words	Cries, inconsolable		<b>4</b>
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams		<b>3</b>
	Incomprehensible sounds		Grunts	Grunts, agitated, restless		<b>2</b>
	No response		No response	No response		<b>1</b>
<b>Total Score</b>						



## Dental, Oral, and Maxillofacial Emergencies

**NOTE**

**Refer student for tetanus booster if it has been 5 years or more since the last vaccination. Tetanus booster is recommended every 10 years.**

SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO  
Stabilize c-spine if head/spinal injury is suspected!**

KEY ASSESSMENT POINTS FOR DENTAL, ORAL, AND MAXILLOFACIAL EMERGENCIES

- Inspect teeth
- Assess ability to open and close mouth
- Assess facial bones, including mandible

IMMEDIATE INTERVENTIONS

**Even before you determine triage category, ensure the adequacy of the student's airway**

TRIAGE CATEGORY/ADDITIONAL INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Airway compromise</li> <li>▪ Change in mental status, LOC</li> <li>▪ Excessive bleeding</li> <li>▪ Suspected fracture of mandible or other facial bones (see <i>Trauma</i> protocol as indicated)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Maintain c-spine stabilization</li> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Treat hemorrhage with direct pressure</li> <li>▪ Apply cold packs to reduce pain/edema</li> <li>▪ For suspected mandible fracture <b>only</b>, stabilize jaw by wrapping cravat around the point of the chin, securing it on top of the head, avoiding pressure on neck</li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Displacement of multiple teeth</li> <li>▪ Avulsion of permanent tooth<sup>a</sup></li> <li>▪ Major chip/fracture of permanent tooth</li> <li>▪ Broken orthodontic appliance</li> <li>▪ Severe toothache</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ If possible, save large tooth chips; cover jagged edge of tooth with gauze</li> <li>▪ For wire protruding from appliance, gently attempt to bend away from oral tissue; if unsuccessful, cover end with gauze or dental wax (<b>do not</b> remove embedded wire)</li> <li>▪ Observe student closely</li> <li>▪ Contact parent/guardian to transport student to dental care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Caries</li> <li>▪ Exfoliation of primary tooth</li> <li>▪ Eruption of permanent tooth</li> <li>▪ Bleeding gums</li> <li>▪ Minor chip/fracture of tooth</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ For minor tooth chip, have student rinse mouth with warm salt water</li> <li>▪ Apply cold compress to edematous areas</li> <li>▪ Observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

<sup>a</sup>**Avulsion of permanent tooth**

**Note:** Replantation is most likely to succeed if attempted within 60 minutes.

- Activate EMS or transport immediately to dentist
- Handle the tooth by the crown, not the root
- If the tooth is dirty, gently rinse in milk or water
- Gently replace tooth in socket (do not use force) **only** if student is alert and able to cooperate
- Instruct student to keep pressure on tooth by biting gently on clean gauze; if unable to do so, place tooth in milk for transport

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**History/pain assessment**

- SAMPLE** history ▪ **PQRST**/other pain assessment

**Focused physical examination**

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

**Triage**

- E**mergent ▪ **U**rgent ▪ **N**onurgent

<sup>a</sup>**Disability Assessment**

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
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- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

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	To verbal command		To shout		3
	To pain		To pain		2
	No response		No response		1
<b>Best motor response</b>	Obeys commands		Spontaneous		6
	Localizes pain		Localizes pain		5
	Flexion-withdrawal		Flexion-withdrawal		4
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2
	No response		No response		1
<b>Best verbal response</b>	<b>Older Than 5 Yr</b>		<b>2-5 Yr</b>		<b>Younger than 2 Yr</b>
	Oriented	Appropriate words/phrases	Smiles/coos appropriately		5
	Disoriented/confused	Inappropriate words	Cries, inconsolable		4
	Inappropriate words	Persistent cries/screams	Persistent inappropriate cries/screams		3
	Incomprehensible sounds	Grunts	Grunts, agitated, restless		2
No response	No response	No response		1	
					<b>Total Score</b>



## Diabetic Emergencies

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR DIABETIC EMERGENCIES

- Respiratory assessment
  - Skin assessment
- Last insulin dose/type of insulin used and route
- Last meal/carbohydrate intake
- Precipitating factors (exercise, change in eating habits/diet, stress, missed insulin dose, illness)
- Current blood glucose level

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<p style="text-align: center;"><b>Severe hypoglycemia</b></p> <p>Glucose less than 60 mg/dL with loss of consciousness or seizures (see <i>Seizures</i> protocol)</p> <p style="text-align: center;"><b>Severe hyperglycemia/DKA</b></p> <p>Glucose exceeds 250 mg/dL with at least 1 of the following:</p> <ul style="list-style-type: none"> <li>▪ Moderate to severe dehydration</li> <li>▪ Abdominal pain/tenderness</li> <li>▪ Kussmaul respiration, fruity breath odor</li> <li>▪ Tachycardia</li> <li>▪ Cool extremities</li> <li>▪ Altered LOC (lethargic to comatose)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Directly/continuously observe student</li> <li>▪ Place in left lateral recovery position to prevent aspiration</li> <li>▪ <b>Consult IHP/ECP</b></li> </ul> <p style="text-align: center;"><b>Hypoglycemia</b></p> <ul style="list-style-type: none"> <li>▪ Administer 1 mg glucagon IM/SQ if available per ECP</li> </ul> <p style="text-align: center;"><b>Severe hyperglycemia</b></p> <ul style="list-style-type: none"> <li>▪ Administer insulin per ECP</li> </ul> <p style="text-align: center;"><b>Diabetic ketoacidosis</b></p> <ul style="list-style-type: none"> <li>▪ Prepare for immediate transport</li> <li>▪ Give nothing by mouth</li> </ul> <p style="text-align: center;"><b>In all cases</b></p> <ul style="list-style-type: none"> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Determine need for diabetes education (parent/guardian, student, school personnel)</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Determine need for EMS</li> <li>▪ Monitor student closely</li> <li>▪ <b>Consult IHP/ECP</b></li> </ul> <p style="text-align: center;"><b>Hypoglycemia</b></p> <ul style="list-style-type: none"> <li>▪ Give glucose tablets/instant glucose equivalent to 15 grams carbs or 4 oz regular soda <b>or</b> juice (orange/apple) followed by snack/next meal</li> <li>▪ As indicated, give extra snack (eg, 2 peanut butter crackers or half sandwich and 8 oz milk)</li> </ul> <p style="text-align: center;"><b>Hyperglycemia</b></p> <ul style="list-style-type: none"> <li>▪ Administer insulin per ECP</li> <li>▪ Increase intake of water</li> <li>▪ Test for ketonuria</li> </ul> <p style="text-align: center;"><b>In all cases</b></p> <ul style="list-style-type: none"> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Determine need for diabetes education (parent/guardian, student, school personnel)</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ S/S of mild hypoglycemia (glucose 60–80 mg/dL; student awake, alert)</li> <li>▪ S/S of mild hyperglycemia (glucose 120–250; student awake, alert)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ <b>Consult IHP/ECP</b></li> </ul> <p style="text-align: center;"><b>Mild hypoglycemia</b></p> <ul style="list-style-type: none"> <li>▪ Give glucose tablets/instant glucose equivalent to 15 grams carbs <b>or</b> 4 oz regular soda or juice (orange/apple) followed by snack/next meal</li> <li>▪ As indicated, give extra snack (eg, 2 peanut butter crackers or half sandwich and 8 oz milk)</li> <li>▪ Recheck glucose in 15 min; if no improvement, repeat treatment</li> <li>▪ If improvement is noted, return student to class or send home as indicated</li> <li>▪ Instruct student to refrain from tasks requiring intense concentration or exertion for 1 hr</li> </ul> <p style="text-align: center;"><b>Mild hyperglycemia</b></p> <ul style="list-style-type: none"> <li>▪ Administer insulin per ECP</li> <li>▪ Increase intake of water</li> <li>▪ Return student to class or send home as indicated</li> </ul> <p style="text-align: center;"><b>In all cases</b></p> <ul style="list-style-type: none"> <li>▪ Contact parent/guardian</li> <li>▪ Determine need for diabetes education (parent/guardian, student, school personnel)</li> <li>▪ Follow up</li> </ul>

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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.**

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- **A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- **A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- **SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- **E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score
<b>Eye opening</b>	Spontaneous		Spontaneous		4
	To verbal command		To shout		3
	To pain		To pain		2
	No response		No response		1
<b>Best motor response</b>	Obeys commands		Spontaneous		6
	Localizes pain		Localizes pain		5
	Flexion-withdrawal		Flexion-withdrawal		4
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2
	No response		No response		1
<b>Best verbal response</b>	<b>Older Than 5 Yr</b>		<b>2-5 Yr</b>		
	Oriented		Appropriate words/phrases	Smiles/coos appropriately	5
	Disoriented/confused		Inappropriate words	Cries, inconsolable	4
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams	3
	Incomprehensible sounds		Grunts	Grunts, agitated, restless	2
No response		No response	No response	1	
<b>Total Score</b>					



## Disaster/Emergency Response: Mass-casualty Incidents

### DEFINITION

**A mass-casualty incident is a situation in which medical care requirements overwhelm local emergency response resources**

#### IMMEDIATE ACTIONS

- Assess scene safety
- Activate EMS
- Determine approximate number of casualties
- Activate incident command

#### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

- Perform triage assessment using START/JumpSTART (see reverse)
- Assign appropriate triage categories
- Dispatch casualties to designated field treatment area

<b>EMERGENT (RED)</b>	<b>URGENT (YELLOW)</b>	<b>NONURGENT (GREEN)</b>	<b>DELAY CARE (BLACK)</b>
<p><b>Life-threatening</b></p> <ul style="list-style-type: none"> <li>▪ Shock</li> <li>▪ Respiratory distress/failure</li> <li>▪ Major burns</li> <li>▪ Fracture of long bone with circulatory compromise</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Assign team members to multiple casualties</li> <li>▪ Maintain ABCs</li> <li>▪ Ensure direct, continuous observation until transfer of care</li> <li>▪ Notify parent/guardian as specified in emergency response plan</li> <li>▪ Assist EMS as appropriate</li> <li>▪ Follow up</li> </ul>	<p><b>Care required within 2 hr</b></p> <ul style="list-style-type: none"> <li>▪ Fracture of long bone <b>without</b> circulatory compromise</li> <li>▪ Laceration <b>without</b> significant blood loss</li> <li>▪ Head injury <b>without</b> loss of consciousness</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Maintain ABCs</li> <li>▪ Initiate appropriate care</li> <li>▪ Notify parent/guardian as specified in emergency response plan</li> <li>▪ Assist EMS as appropriate</li> <li>▪ Provide for counseling</li> <li>▪ Follow up</li> </ul>	<p><b>Nonacute/minor condition</b></p> <ul style="list-style-type: none"> <li>▪ Major abrasions/ecchymoses</li> <li>▪ Muscle sprains/strains</li> <li>▪ Emotional distress</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Initiate appropriate care</li> <li>▪ Monitor for changes</li> <li>▪ Notify parent/guardian as specified in emergency response plan</li> <li>▪ Provide for counseling</li> <li>▪ Follow up</li> </ul>	<p><b>Survival unlikely</b></p> <ul style="list-style-type: none"> <li>▪ Massive open head trauma</li> <li>▪ Cardiac arrest</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Do not render care until adequate resources and personnel permit</li> <li>▪ Follow up</li> </ul>

### EMS TRIAGE CATEGORIZATION FOR MASS-CASUALTY INCIDENTS

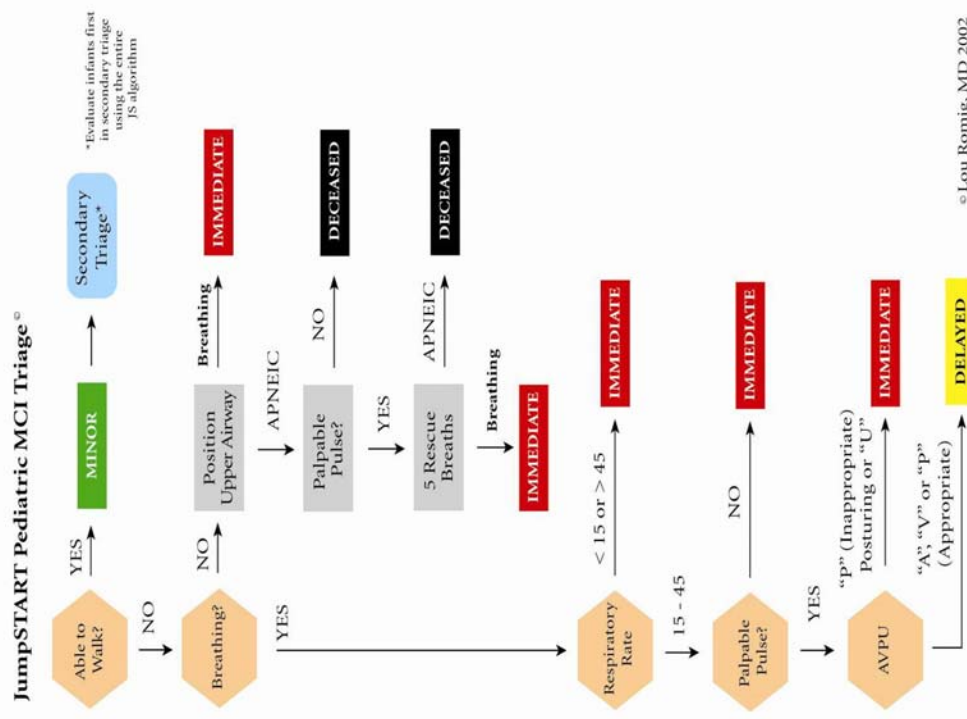
Category	Condition
<b>Red</b>	Potential threat to life or function requiring immediate intervention
<b>Yellow</b>	Acute condition that is <b>not</b> life- or limb-threatening, requiring care within 1–2 hours
<b>Green</b>	Nonacute or minor condition
<b>Black</b>	Catastrophic injury or condition such that survival is unlikely (in a disaster situation, resources do not allow for resuscitation of such patients)

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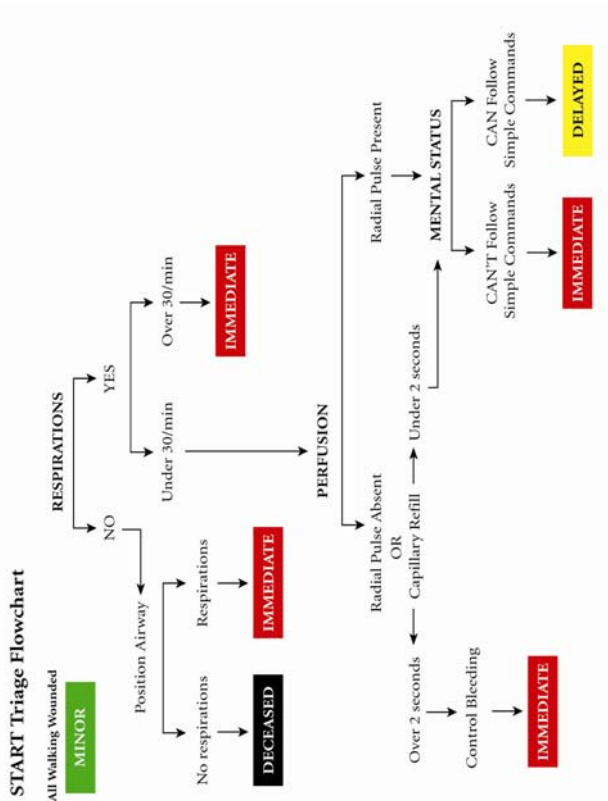


# START/JumpSTART Algorithms for MCI Triage



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MCI denotes mass-casualty incident





## Ear Emergencies

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO  
Stabilize c-spine if head/spinal injury is suspected!**

#### KEY ASSESSMENT POINTS FOR EAR EMERGENCIES

- Skin assessment for wounds, blisters, erythema, edema, hematomas, bleeding
- Focused physical assessment (external/otoscopic)
- Hearing evaluation

### IMMEDIATE INTERVENTIONS

**Even before you determine triage category, perform the following actions as indicated**

- Control bleeding
- Apply appropriate dressing

### TRIAGE CATEGORY/ADDITIONAL INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Change in mental status, LOC</li> <li>▪ Laceration/avulsion/hematoma of external ear with uncontrollable bleeding (see <i>Head/Spinal Cord</i> protocol as indicated)</li> <li>▪ Burn or direct thermal injury</li> <li>▪ Acute hearing loss</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Maintain spinal stabilization if applicable</li> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Directly/continuously observe student</li> <li>▪ Maintain position of comfort</li> <li>▪ Keep student calm</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Foreign body in ear</li> <li>▪ Mild hematoma</li> <li>▪ Abrasions/minor lacerations of external ear (see <i>Lacerations/Abrasions</i> protocol)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <p style="text-align: center;"><b>Foreign body</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS</li> <li>▪ Do not attempt to remove unless object is visible and can be gripped with forceps or fingers</li> <li>▪ If object is a live insect, instill 1–2 drops of mineral oil</li> </ul> <p style="text-align: center;"><b>In All Cases</b></p> <ul style="list-style-type: none"> <li>▪ Closely monitor student</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Maintain position of comfort</li> <li>▪ Observe student</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mild earache without drainage</li> <li>▪ Associated low-grade fever</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Send student home if pain is persistent <b>or</b> accompanied by fever</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

#### NOTE

**Refer student for tetanus booster if it has been 5 years or more since the last vaccination. Tetanus booster is recommended every 10 years.**

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## Tools for Assessing Students

**SYSTEMATIC ASSESSMENT**

*NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.*

**Scene safety assessment**

- Call for assistance as indicated

**Across-the-room assessment**

Use Pediatric Assessment Triangle (PAT)

- A**ppearance ▪ **B**reathing ▪ **C**irculation

**Initial assessment**

- Standard precautions ▪ C-spine stabilization
- A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

**History/pain assessment**

- SAMPLE** history ▪ **PQRST**/other pain assessment

**Focused physical examination**

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

**Triage**

- E**mergent ▪ **U**rgent ▪ **N**onurgent

<sup>a</sup>**Disability Assessment**

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score	
<b>Eye opening</b>	Spontaneous		Spontaneous		4	
	To verbal command		To shout		3	
	To pain		To pain		2	
	No response		No response		1	
<b>Best motor response</b>	Obeys commands		Spontaneous		6	
	Localizes pain		Localizes pain		5	
	Flexion-withdrawal		Flexion-withdrawal		4	
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3	
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2	
	No response		No response		1	
	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr		
<b>Best verbal response</b>	Oriented		Appropriate words/phrases	Smiles/coos appropriately		5
	Disoriented/confused		Inappropriate words	Cries, inconsolable		4
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams		3
	Incomprehensible sounds		Grunts	Grunts, agitated, restless		2
	No response		No response	No response		1
<b>Total Score</b>						



## Eating Disorders

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR EATING DISORDERS

- History of food intake and level of exercise
- Skin assessment
- Menstrual history
- Mental status examination or other brief psychosocial profile
- Focused physical assessment of weight (have student remove shoes/bulky outer wear)

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Cardiac arrest</li> <li>▪ Seizure activity (see <i>Seizures</i> protocol)</li> <li>▪ Hypotension</li> <li>▪ Bradycardia</li> <li>▪ Lethargy</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Orthostatic vital signs<sup>a</sup></li> <li>▪ Significant weight loss</li> <li>▪ Tooth enamel erosion</li> <li>▪ Weakness</li> <li>▪ Poor skin turgor</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Determine need for EMS</li> <li>▪ Encourage fluid intake in small quantities</li> <li>▪ Provide nonthreatening environment</li> <li>▪ Observe student closely</li> <li>▪ Discuss the need for medical evaluation/counseling with parent/guardian</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Normal vital signs</li> <li>▪ Suspicion or early signs of eating disorder<sup>b</sup></li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Provide nonthreatening environment</li> <li>▪ Observe student</li> <li>▪ Discuss health consequences of behavior</li> <li>▪ Contact parent/guardian</li> <li>▪ Refer to school counselor</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

#### <sup>a</sup>Orthostatic vital signs

Assess BP and HR while student is supine. Have student sit up or stand and reassess 1 min later. If BP decreases by more than 20 mm Hg or HR increases by 20 bpm, orthostasis is present.

#### <sup>b</sup>Early signs/psychosocial attributes associated with eating disorders

- High achiever/perfectionist
- Low self-esteem/depression
- History of substance abuse
- Intense fear of weight gain
- Evidence of body dysmorphia
- Rigid self-control
- Decreased food intake, self-induced vomiting, use of laxatives/diuretics/emetics
- Vigorous exercising to achieve weight loss rather than fitness
- Recent history of weight loss/weight fluctuations
- Preference for oversized clothing
- Amenorrhea
- Hypothermia
- Lanugo (downy hair)
- Weakness
- Poor skin turgor
- Esophagitis, oral lesions
- Dental caries, tooth enamel erosion

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	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2
	No response		No response		1
<b>Best verbal response</b>	<b>Older Than 5 Yr</b>		<b>2-5 Yr</b>		
	Oriented		Appropriate words/phrases	Smiles/coos appropriately	5
	Disoriented/confused		Inappropriate words	Cries, inconsolable	4
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams	3
	Incomprehensible sounds		Grunts	Grunts, agitated, restless	2
No response		No response	No response	1	
<b>Total Score</b>					



## Eye Emergencies

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO  
Stabilize c-spine if spinal injury is suspected!**

#### KEY ASSESSMENT POINTS FOR EYE EMERGENCIES

- Events leading up to injury (eg, chemical exposure, other burn)
- AS TOLERATED, focused physical examination of the eye/vision assessment for
  - visible wounds, drainage, foreign body
  - extraocular movement
  - PERRLA
  - visual acuity

### IMMEDIATE INTERVENTIONS

**For chemical burns involving the eye, IMMEDIATELY activate EMS, then ensure scene safety and begin flushing eye copiously with saline, eyewash solution, or water**

### TRIAGE CATEGORY/ADDITIONAL INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Change in mental status, LOC</li> <li>▪ Penetrating injury</li> <li>▪ Chemical/thermal burn</li> <li>▪ Unequal/irregular pupils</li> <li>▪ Blunt injury (see <i>Head/Spinal Cord</i> protocol)</li> <li>▪ Embedded foreign body</li> <li>▪ Hyphema (haze or blood in iris)</li> <li>▪ Decreased visual acuity/loss of vision</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Maintain c-spine stabilization as applicable</li> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Protect eye from further injury</li> </ul> <p style="text-align: center;"><b>Chemical burns</b></p> <ul style="list-style-type: none"> <li>▪ Continue irrigation while awaiting EMS</li> <li>▪ Send copy of MSDS to ED</li> </ul> <p style="text-align: center;"><b>Penetrating injuries</b></p> <ul style="list-style-type: none"> <li>▪ Stabilize object with gauze pads</li> <li>▪ Tape disposable drinking cup over dressing (do not allow it to contact object)</li> </ul> <p style="text-align: center;"><b>Thermal burns</b></p> <ul style="list-style-type: none"> <li>▪ Do not inspect eyes</li> <li>▪ Apply loose, moist dressing</li> </ul> <p style="text-align: center;"><b>Radiation burns</b> (eg, from arc welder, sunlight, sun lamp)</p> <ul style="list-style-type: none"> <li>▪ Cover with eye patch</li> </ul> <p style="text-align: center;"><b>In all cases</b></p> <ul style="list-style-type: none"> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Blunt trauma without vision changes</li> <li>▪ S/S extraocular muscle entrapment</li> <li>▪ Suspected corneal abrasion</li> <li>▪ Laceration of lid</li> <li>▪ Blurry/impaired vision</li> <li>▪ Diplopia</li> <li>▪ Eye pain/guarding</li> <li>▪ Sensation of foreign body persisting more than 1 hr</li> <li>▪ Bilateral periorbital ecchymoses (raccoon eyes)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS</li> <li>▪ If no evidence of injury, apply cool compress for 20 min</li> <li>▪ Instruct student not to move rapidly, bend over, or cough</li> <li>▪ Observe student closely</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Superficial foreign body</li> <li>▪ Subconjunctival hemorrhage (may follow violent coughing or vomiting)</li> <li>▪ Minor periorbital lacerations</li> <li>▪ Minor periorbital ecchymoses</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <p style="text-align: center;"><b>Foreign body</b></p> <ul style="list-style-type: none"> <li>▪ If foreign body is visible in sac of lower lid, remove with cotton-tipped applicator</li> <li>▪ If unsuccessful after 2 attempts, or if foreign body is located elsewhere, flush with saline, eyewash solution, or water</li> </ul> <p style="text-align: center;"><b>In all cases</b></p> <ul style="list-style-type: none"> <li>▪ Observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.**

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score	
<b>Eye opening</b>	Spontaneous		Spontaneous		4	
	To verbal command		To shout		3	
	To pain		To pain		2	
	No response		No response		1	
<b>Best motor response</b>	Obeys commands		Spontaneous		6	
	Localizes pain		Localizes pain		5	
	Flexion-withdrawal		Flexion-withdrawal		4	
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3	
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2	
	No response		No response		1	
	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr		
<b>Best verbal response</b>	Oriented		Appropriate words/phrases	Smiles/coos appropriately		5
	Disoriented/confused		Inappropriate words	Cries, inconsolable		4
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams		3
	Incomprehensible sounds		Grunts	Grunts, agitated, restless		2
	No response		No response	No response		1
<b>Total Score</b>						



## Foreign Body Airway Obstruction

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see *Assessment protocol*), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR FOREIGN BODY AIRWAY OBSTRUCTION

- Evaluation of airway/respiratory status
  - Suddenness of onset
- Events leading up to incident (eg, witnessed ingestion/aspiration of small object, toy, or food)

**Note: Fever or S/S of respiratory illness decreases the likelihood of foreign body etiology**

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<p style="text-align: center;"><b>Severe airway obstruction</b></p> <ul style="list-style-type: none"> <li>▪ Choking, silent cough <b>or</b></li> <li>▪ Unable to cough, speak, or make any sound</li> <li>▪ Apnea</li> <li>▪ Pallor or cyanosis</li> <li>▪ Loss of consciousness</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <p style="text-align: center;"><b>Severe Obstruction</b></p> <p>Begin AHA airway clearing maneuvers. <b>See reverse for detailed procedure.</b></p> <ul style="list-style-type: none"> <li>▪ In infants younger than 1 yr, apply 5 back slaps and 5 chest thrusts</li> <li>▪ In children older than 1 yr, perform abdominal thrusts (Heimlich maneuver)</li> <li>▪ Continue until either the object is expelled or the infant or child becomes unresponsive</li> <li>▪ Begin CPR, checking inside the mouth before each series of rescue breaths to see whether the object <b>is visible</b> and can be removed</li> </ul> <p><b>Note: Do not</b> attempt blind finger sweeps! Foreign body may be pushed further into the airway, exacerbating obstruction.</p> <ul style="list-style-type: none"> <li>▪ Activate EMS if efforts are unsuccessful after 1 minute</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><b>Mild airway obstruction</b></p> <ul style="list-style-type: none"> <li>▪ History of aspiration</li> <li>▪ Fast breathing</li> <li>▪ Intermittent wheezing or stridor</li> <li>▪ Gagging, choking, coughing</li> <li>▪ Pink skin color</li> <li>▪ Mild to moderate dyspnea</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Encourage forceful cough</li> <li>▪ <b>Do not interfere in any other way</b></li> <li>▪ Monitor for worsening distress, ineffective cough, inspiratory wheezing, labored breathing, tachycardia</li> <li>▪ If signs of severe obstruction develop, triage as <b>Emergent</b> and begin AHA airway clearing maneuvers (see reverse)</li> <li>▪ If student's efforts clear the obstruction, contact parent/guardian to transport student to medical care or home</li> <li>▪ Notify school administrator</li> <li>▪ Provide psychological support</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Witnessed ingestion/aspiration</li> <li>▪ Student clears obstruction by coughing</li> <li>▪ No S/S of continued obstruction</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Observe student at frequent intervals throughout day</li> <li>▪ Contact parent/guardian</li> <li>▪ Provide psychological support</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> <li>▪ <b>NOTE:</b> If student continues to cough the next day, suspect retained bronchial foreign body, bronchitis, or pneumonia.</li> <li>▪ Follow up</li> </ul>

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## AHA Airway Clearing Maneuvers

### Responsive Infant

- Sit or kneel, holding the infant prone. Rest your forearm on your thigh and support the infant's head by firmly holding the infant's face and jaw. Place your other hand on the infant's back, supporting the occiput. The infant should be sandwiched between your forearms, with the head lower than the trunk.
- Using the heel of your hand, deliver 5 forceful back slaps (Figure 1).
- Turn the infant supine while continuing to support the head and neck. Position the infant on your thigh, keeping the head lower than the trunk.
- Continue to support the occiput with one hand. Place your other hand just below the intermammary line, as you would to deliver chest compressions. Deliver 5 quick downward chest thrusts (Figure 2).
- Continue to alternate back slaps and chest thrusts until either the object is expelled or the infant becomes unresponsive.

Figure 1



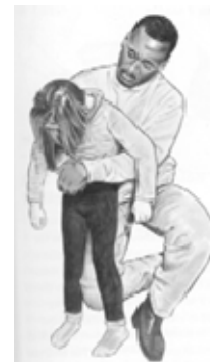
Figure 2



### Unresponsive Infant

- Look in the infant's mouth. Attempt to remove the object **if it is visible**.
- Open the airway using a jaw-thrust maneuver. Attempt rescue breaths. If the breaths are not effective, reposition the infant's head and try again.
- Begin CPR, compressing the sternum with 2 fingers just below the intermammary line.
- Look inside the mouth before each series of rescue breaths and attempt to remove the object **if it is visible**. Repeat these steps up to 1 minute until either the object is dislodged or rescue breathing is successful.
- If attempts are not successful after 1 minute, activate EMS.
- Return to CPR until efforts are successful or EMS responders arrive.

Figure 3



### Responsive Child

- Stand or kneel behind the child. Place your arms directly under the child's axillae, encircling the chest.
- Place the radial side of your fist against the child's abdomen at the midline, slightly above the navel and well below the tip of the xiphoid process.
- Grasp your fist with your other hand. Deliver a series of quick abdominal thrusts, directed inward and upward (Figure 3). Make each thrust separate and distinct. Use sufficient force to dislodge the obstruction, but do not compress the xiphoid process or the lower margins of the rib cage, as this could damage internal organs.
- Repeat the series of abdominal thrusts until the object is expelled or the child becomes unresponsive.

Figure 4



### Unresponsive Child

- Look in the child's mouth. Attempt to remove the object **if it is visible**.
- Open the airway using a jaw-thrust maneuver. Attempt rescue breaths. If the breaths are not effective, reposition the child's head and try again.
- Position yourself either kneeling beside or straddling the child's hips. Begin CPR (Figure 4).
- Look inside the mouth before each series of rescue breaths and attempt to remove the object **if it is visible**. Continue CPR up to 1 minute, until either the object is dislodged or rescue breathing is successful.
- If attempts are not successful after 1 minute, activate EMS.
- Return to CPR until efforts are successful or EMS responders arrive.

*Figs: American Heart Association, Pediatric Advanced Life Support Provider Manual, 2000*

AHA indicates American Heart Association





# Headache

SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

**KEY ASSESSMENT POINTS FOR HEADACHES**

- Mental status/neurologic assessment
- Past health history of headaches or recent head injury
- Events leading up to onset, such as stress, exposure to a known trigger, aura
- Focused physical assessment for neck stiffness
- Assessment for visual disturbances (see *Eye Emergencies* protocol)

TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

<p style="text-align: center;"><b>EMERGENT</b></p> <ul style="list-style-type: none"> <li>▪ Change in mental status, LOC</li> <li>▪ Acute neurologic deficit</li> <li>▪ Seizure activity (see <i>Seizures</i> protocol)</li> <li>▪ Severe headache (eg, c/o “worst headache of my life”)</li> <li>▪ Stiff neck with fever</li> <li>▪ Recent head injury</li> <li>▪ Hypertension</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><b>URGENT</b></p> <ul style="list-style-type: none"> <li>▪ Moderate headache with vomiting</li> <li>▪ History of aura</li> <li>▪ Exposure to known trigger</li> <li>▪ Blurred vision, dizziness, photophobia</li> <li>▪ No neurologic deficit</li> <li>▪ History of migraines</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS</li> <li>▪ Provide rest in quiet, darkened room</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Administer medication per IHP/ECP</li> <li>▪ Observe student closely</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><b>NONURGENT</b></p> <ul style="list-style-type: none"> <li>▪ Generalized mild headache</li> <li>▪ S/S of URI</li> <li>▪ S/S of sinus infection</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Allow student to rest supine for 30 min</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Administer medication per IHP/ECP</li> <li>▪ Observe student</li> <li>▪ Reassess</li> <li>▪ Educate about avoiding triggers</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>
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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE:** Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- **A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- **A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- **SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- **E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score	
<b>Eye opening</b>	Spontaneous		Spontaneous		<b>4</b>	
	To verbal command		To shout		<b>3</b>	
	To pain		To pain		<b>2</b>	
	No response		No response		<b>1</b>	
<b>Best motor response</b>	Obeys commands		Spontaneous		<b>6</b>	
	Localizes pain		Localizes pain		<b>5</b>	
	Flexion-withdrawal		Flexion-withdrawal		<b>4</b>	
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		<b>3</b>	
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		<b>2</b>	
	No response		No response		<b>1</b>	
	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr		
<b>Best verbal response</b>	Oriented		Appropriate words/phrases	Smiles/coos appropriately		<b>5</b>
	Disoriented/confused		Inappropriate words	Cries, inconsolable		<b>4</b>
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams		<b>3</b>
	Incomprehensible sounds		Grunts	Grunts, agitated, restless		<b>2</b>
	No response		No response	No response		<b>1</b>
<b>Total Score</b>						



## Head/Spinal Cord Trauma

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO. Stabilize c-spine—DO NOT move student!**

#### KEY ASSESSMENT POINTS FOR HEAD/SPINAL CORD TRAUMA

- Mental status/neurologic assessment
  - Events leading up to injury
  - Mechanism of injury
- Assessment for visual disturbances (see *Eye Emergencies* protocol)

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Change in mental status, LOC (including drowsiness, lethargy)</li> <li>▪ Abnormal behavior/loss of normal abilities</li> <li>▪ Seizure activity (see <i>Seizures</i> protocol)</li> <li>▪ Loss of/decreased movement or sensation in extremities</li> <li>▪ Blood/CSF discharge from nose/ears</li> <li>▪ Significant trauma to head/neck <b>or</b> high-risk mechanism of injury</li> <li>▪ Evidence of depressed skull fracture</li> <li>▪ Paresthesia</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Maintain c-spine stabilization</li> <li>▪ Apply direct pressure to bleeding <b>except</b> over depressed skull injury</li> <li>▪ Keep student warm</li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Brief period of confusion/amnesia</li> <li>▪ Neck pain</li> <li>▪ Dizziness</li> <li>▪ Blurred vision/diplopia</li> <li>▪ Headache</li> <li>▪ Nausea/vomiting</li> <li>▪ Laceration requiring sutures (see <i>Lacerations/Abrasions</i> protocol)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Determine need for EMS</li> <li>▪ Maintain c-spine stabilization</li> <li>▪ Control bleeding with direct pressure</li> <li>▪ Apply cold packs to swollen areas</li> <li>▪ Keep student warm</li> <li>▪ Observe student closely</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Alert</li> <li>▪ Minor abrasions, lacerations, or edema</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Apply cold packs as indicated</li> <li>▪ Observe student closely</li> <li>▪ Reassess after 15–30 min</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Advise parent/guardian, teachers, coaches of injury and emphasize need for observation over next 24–48 hours, seeking medical care if the student exhibits any of the following:                             <ul style="list-style-type: none"> <li>▪ dizziness</li> <li>▪ headache</li> <li>▪ nausea</li> <li>▪ photophobia</li> <li>▪ diplopia</li> <li>▪ irritability</li> <li>▪ poor concentration</li> <li>▪ decline in academic ability</li> <li>▪ personality changes</li> </ul> </li> <li>▪ Follow up</li> </ul>

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**History/pain assessment**

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**Focused physical examination**

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<sup>a</sup>**Disability Assessment**

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<b>Best motor response</b>	Obeys commands		Spontaneous		6
	Localizes pain		Localizes pain		5
	Flexion-withdrawal		Flexion-withdrawal		4
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2
	No response		No response		1
<b>Best verbal response</b>	<b>Older Than 5 Yr</b>		<b>2-5 Yr</b>		
	Oriented		Appropriate words/phrases	Smiles/coos appropriately	5
	Disoriented/confused		Inappropriate words	Cries, inconsolable	4
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams	3
	Incomprehensible sounds		Grunts	Grunts, agitated, restless	2
No response		No response	No response	1	
<b>Total Score</b>					



## Heat-related Injuries

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**  
**KEY ASSESSMENT POINTS FOR HEAT-RELATED INJURIES**

- Skin assessment (eg, color, other skin findings)

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ S/S of heat stroke                             <ul style="list-style-type: none"> <li>• Hyperthermia (T exceeding 104°F/40°C)</li> <li>• Confusion/diminished LOC</li> <li>• Hot/dry/red skin</li> <li>• Tachycardia/weak peripheral pulses</li> <li>• Syncope</li> <li>• Ataxia</li> </ul> </li> <li>▪ Seizure activity (see <i>Seizures</i> protocol)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <p style="text-align: center;"><b>Heat stroke is a life-threatening emergency!</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Immediately remove from heat to a cool environment</li> <li>▪ Immediately initiate cooling measures:                             <ul style="list-style-type: none"> <li>• Loosen clothing</li> <li>• Apply cool, wet towels to neck, groin, axillae</li> <li>• Sponge with cool compresses</li> <li>• Fan student</li> </ul> </li> <li>▪ Place in left lateral recovery position in case of vomiting</li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Oriented</li> <li>▪ Mild tachycardia</li> <li>▪ S/S of heat exhaustion                             <ul style="list-style-type: none"> <li>• Cool, moist, pale skin</li> <li>• Dilated pupils</li> <li>• Mild to moderate headache</li> <li>• Nausea/vomiting</li> <li>• Muscle cramps</li> <li>• Weakness, dizziness</li> <li>• Normothermic to mildly hyperthermic (T less than 101°F/38.3°C)</li> <li>• Diaphoresis</li> <li>• Orthostatic vital signs<sup>a</sup></li> </ul> </li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS</li> <li>▪ Observe continuously</li> <li>▪ Allow to rest in cool environment</li> <li>▪ Loosen clothing</li> <li>▪ Apply cool, wet towels</li> <li>▪ Fan student</li> <li>▪ In the absence of vomiting, encourage fluid replacement with water or a diluted electrolyte-replacement drink as permitted by applicable protocols</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mild cramping of calves, thighs, shoulders</li> <li>▪ Normothermic</li> <li>▪ Awake and alert</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Allow to rest in cool environment</li> <li>▪ Loosen clothing</li> <li>▪ Observe student</li> <li>▪ Encourage fluid replacement with water or a diluted electrolyte-replacement drink as permitted by applicable protocols</li> <li>▪ Educate student about maintaining adequate hydration during higher-risk activities</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

<sup>a</sup>**Orthostatic vital signs**

Assess BP and HR while student is supine. Have student sit up or stand and reassess 1 min later. If BP decreases by more than 20 mm Hg or HR increases by 20 bpm, orthostasis is present.

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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.**

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- **A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- **A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- **SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- **E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score	
<b>Eye opening</b>	Spontaneous		Spontaneous		<b>4</b>	
	To verbal command		To shout		<b>3</b>	
	To pain		To pain		<b>2</b>	
	No response		No response		<b>1</b>	
<b>Best motor response</b>	Obeys commands		Spontaneous		<b>6</b>	
	Localizes pain		Localizes pain		<b>5</b>	
	Flexion-withdrawal		Flexion-withdrawal		<b>4</b>	
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		<b>3</b>	
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		<b>2</b>	
	No response		No response		<b>1</b>	
	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr		
<b>Best verbal response</b>	Oriented		Appropriate words/phrases	Smiles/coos appropriately		<b>5</b>
	Disoriented/confused		Inappropriate words	Cries, inconsolable		<b>4</b>
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams		<b>3</b>
	Incomprehensible sounds		Grunts	Grunts, agitated, restless		<b>2</b>
	No response		No response	No response		<b>1</b>
<b>Total Score</b>						



# Hemophilia

## SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

### KEY ASSESSMENT POINTS FOR HEMOPHILIA

- History relating to recent surgery, medical procedures, dental extractions, or injuries
- Focused physical examination for external bleeding, lacerations, ecchymoses, abrasions, hematomas

## IMMEDIATE INTERVENTIONS

**Even before you determine triage category, attempt to control external bleeding by applying firm pressure for 10 min**

## TRIAGE CATEGORY/ADDITIONAL INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ S/S of internal bleeding:                             <ul style="list-style-type: none"> <li>• Headache</li> <li>• Dizziness</li> <li>• Visual disturbances</li> <li>• Neurologic deficit</li> <li>• Altered LOC/pupillary changes</li> </ul> </li> <li>▪ Signs of shock</li> <li>▪ Profuse, uncontrollable hemorrhage</li> <li>▪ Severe abdominal pain</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ For shock, place in Trendelenburg position</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Directly/continuously observe student</li> <li>▪ Frequently reassess vital signs and <b>AVPU</b></li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Acute joint swelling/pain</li> <li>▪ Abdominal discomfort, tenderness on palpation, nausea</li> <li>▪ External bleeding not responsive to prolonged pressure</li> <li>▪ Indications of intramuscular hematoma (most commonly felt in knees, ankles, elbows): tingling, pain, limited ROM, edema, increased warmth/tenderness</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Determine need for EMS</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Reassess vital signs</li> <li>▪ Apply cold pack to swollen joint</li> <li>▪ Observe student closely</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Minor lacerations, ecchymoses, abrasions</li> <li>▪ Bleeding responds to pressure</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Apply firm, direct pressure</li> <li>▪ Apply cold pack as indicated</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return to class when bleeding stops or send home as indicated</li> <li>▪ Educate student parent/guardian and school personnel about playground/sport safety</li> <li>▪ Follow up</li> </ul>

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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.**

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- **A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- **A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- **SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- **E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score	
<b>Eye opening</b>	Spontaneous		Spontaneous		<b>4</b>	
	To verbal command		To shout		<b>3</b>	
	To pain		To pain		<b>2</b>	
	No response		No response		<b>1</b>	
<b>Best motor response</b>	Obeys commands		Spontaneous		<b>6</b>	
	Localizes pain		Localizes pain		<b>5</b>	
	Flexion-withdrawal		Flexion-withdrawal		<b>4</b>	
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		<b>3</b>	
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		<b>2</b>	
	No response		No response		<b>1</b>	
	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr		
<b>Best verbal response</b>	Oriented		Appropriate words/phrases	Smiles/coos appropriately		<b>5</b>
	Disoriented/confused		Inappropriate words	Cries, inconsolable		<b>4</b>
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams		<b>3</b>
	Incomprehensible sounds		Grunts	Grunts, agitated, restless		<b>2</b>
	No response		No response	No response		<b>1</b>
<b>Total Score</b>						





## Increased Intracranial Pressure in a Student With a Ventriculoperitoneal Shunt

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR STUDENTS WITH VP SHUNTS

- Facial symmetry
  - Gag reflex
- Pupil size/reactivity
- Extraocular eye movements
- Neurologic function
- Pediatric GCS score
- Symmetry of function/strength, posture, gait, balance, spontaneous movement

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

<b>EMERGENT</b>	<b>URGENT</b>	<b>NONURGENT</b>
<ul style="list-style-type: none"> <li>▪ Change in mental status, LOC</li> <li>▪ Lethargy</li> <li>▪ Acute neurologic deficit</li> <li>▪ Inability to look up/roll eyes upward</li> <li>▪ New onset eye deviation</li> <li>▪ Seizure (see <i>Seizures</i> protocol)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact physician for instructions</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Early S/S of shunt dysfunction:                             <ul style="list-style-type: none"> <li>▪ Headache</li> <li>▪ Irritability</li> <li>▪ Vomiting</li> <li>▪ Decreased appetite</li> <li>▪ Change in personality</li> <li>▪ Loss of existing skills or abilities</li> <li>▪ Swelling/erythema along shunt path</li> <li>▪ Seizures</li> <li>▪ Loss of balance</li> </ul> </li> <li>▪ S/S of shunt tract infection</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Determine need for EMS</li> <li>▪ Place student supine</li> <li>▪ Elevate head</li> <li>▪ Allow student to rest</li> <li>▪ Reduce environmental stimuli</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Observe student closely</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Headache</li> <li>▪ Normal neurologic assessment and PGCS score</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Allow student to rest 30 min, then reassess</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Reassess every 2 hours if student remains at school</li> <li>▪ Follow up</li> </ul>

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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE:** Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- **A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- **A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- **SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- **E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score	
<b>Eye opening</b>	Spontaneous		Spontaneous		<b>4</b>	
	To verbal command		To shout		<b>3</b>	
	To pain		To pain		<b>2</b>	
	No response		No response		<b>1</b>	
<b>Best motor response</b>	Obeys commands		Spontaneous		<b>6</b>	
	Localizes pain		Localizes pain		<b>5</b>	
	Flexion-withdrawal		Flexion-withdrawal		<b>4</b>	
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		<b>3</b>	
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		<b>2</b>	
	No response		No response		<b>1</b>	
	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr		
<b>Best verbal response</b>	Oriented		Appropriate words/phrases	Smiles/coos appropriately		<b>5</b>
	Disoriented/confused		Inappropriate words	Cries, inconsolable		<b>4</b>
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams		<b>3</b>
	Incomprehensible sounds		Grunts	Grunts, agitated, restless		<b>2</b>
	No response		No response	No response		<b>1</b>
<b>Total Score</b>						



## Lacerations/Abrasions

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR LACERATIONS AND ABRASIONS

- Inspection of wound
- Neurovascular assessment distal to injury:
  - Pain, pulse, pallor, paresthesia, paralysis (**5 Ps** mnemonic)
  - Capillary refill
  - Edema
  - Skin temperature

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Absent distal pulses</li> <li>▪ Significant blood loss</li> <li>▪ Crush injury</li> <li>▪ Amputation (see <i>Trauma</i> protocol)</li> <li>▪ Penetrating wound</li> <li>▪ Capillary refill exceeds 2 sec</li> <li>▪ Altered LOC</li> <li>▪ S/S of respiratory distress</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Control hemorrhage</li> <li>▪ Elevate/immobilize extremity</li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stable vital signs</li> <li>▪ Pulses present distal to injury</li> <li>▪ Significantly contaminated lacerations</li> <li>▪ Facial lacerations</li> <li>▪ Puncture wounds of foot</li> <li>▪ Wounds requiring sutures</li> <li>▪ Controllable bleeding</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Determine need for EMS</li> <li>▪ Control bleeding with direct pressure</li> <li>▪ Observe student closely</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stable vital signs</li> <li>▪ Superficial abrasion, scrape, or wound</li> <li>▪ Small splinter or foreign body</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Remove splinter</li> <li>▪ Cleanse wounds using aseptic technique<sup>a</sup></li> <li>▪ Bandage wounds</li> <li>▪ Observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

#### <sup>a</sup>General wound care/aseptic cleansing

- Clean wounds thoroughly with soap.
  - Rub abrasions gently with 4x4 gauze to remove debris and crusts.
  - Rinse copiously with water.
  - Bandage abrasions loosely, using nonadherent gauze to allow air circulation.
  - Apply butterfly bandage to lacerations after bleeding has been controlled.
- Due to high risk of infection, all deep puncture wounds of the foot must be referred to a physician.

#### NOTE

**Refer student for tetanus booster if it has been 5 years or more since the last vaccination. Tetanus booster is recommended every 10 years.**

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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.**

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- **A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- **A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- **SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- **E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score	
<b>Eye opening</b>	Spontaneous		Spontaneous		<b>4</b>	
	To verbal command		To shout		<b>3</b>	
	To pain		To pain		<b>2</b>	
	No response		No response		<b>1</b>	
<b>Best motor response</b>	Obeys commands		Spontaneous		<b>6</b>	
	Localizes pain		Localizes pain		<b>5</b>	
	Flexion-withdrawal		Flexion-withdrawal		<b>4</b>	
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		<b>3</b>	
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		<b>2</b>	
	No response		No response		<b>1</b>	
	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr		
<b>Best verbal response</b>	Oriented		Appropriate words/phrases	Smiles/coos appropriately		<b>5</b>
	Disoriented/confused		Inappropriate words	Cries, inconsolable		<b>4</b>
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams		<b>3</b>
	Incomprehensible sounds		Grunts	Grunts, agitated, restless		<b>2</b>
	No response		No response	No response		<b>1</b>
<b>Total Score</b>						



## Musculoskeletal Injury

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO  
Stabilize c-spine if head/spinal injury is suspected!**

#### KEY ASSESSMENT POINTS FOR MUSCULOSKELETAL INJURIES

Focused physical examination of affected area:

- Bilateral symmetry
  - ROM/strength
- Visual inspection for abnormalities

Neurovascular status distal to injury:

- Pain, pulse, pallor, paresthesia, paralysis (**5 Ps**)
- Edema
- Capillary refill
- Skin temperature

### IMMEDIATE INTERVENTIONS

**Even before you determine triage category,  
immobilize and support affected area proximal and distal to injury**

### TRIAGE CATEGORY/ADDITIONAL INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

<b>EMERGENT</b>	<b>URGENT</b>	<b>NONURGENT</b>
<ul style="list-style-type: none"> <li>▪ Open fracture</li> <li>▪ Amputation (see <i>Trauma</i> protocol)</li> <li>▪ Degloving injury</li> <li>▪ Neurovascular compromise</li> <li>▪ Severe edema/deformity at joint or extremity</li> <li>▪ Joint deviation</li> <li>▪ Suspected femoral fracture</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Instruct student to avoid weight-bearing/movement of injured area</li> <li>▪ Immobilize and position suspected fractures/dislocations (see reverse)</li> <li>▪ Reassess neurovascular status distal to injury every 5–10 min</li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stable vital signs</li> <li>▪ Moderate deformity/discoloration without open wound</li> <li>▪ Moderate edema at joint or extremity</li> <li>▪ Moderate pain/guarding</li> <li>▪ Normal neurovascular findings</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Determine need for EMS</li> <li>▪ Immobilize and position suspected fracture/dislocation (see reverse)</li> <li>▪ Elevate extremity</li> <li>▪ Apply cold packs</li> <li>▪ Observe student closely</li> <li>▪ Reassess neurovascular status distal to injury every 5–10 min</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Normal vital signs</li> <li>▪ No deformity</li> <li>▪ Mild soft tissue edema</li> <li>▪ Mild pain/point tenderness</li> <li>▪ Able to bear weight</li> <li>▪ Normal neurovascular findings</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Apply cold pack</li> <li>▪ Elevate area</li> <li>▪ Observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

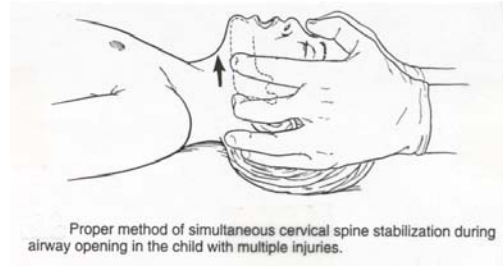
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## Interventions for Musculoskeletal Injuries

### MANUAL CERVICAL SPINE STABILIZATION

- Position student supine
- Place both hands along lateral aspect of student's head
- Position the head so that the neck is in neutral alignment with the spine
- Continue to support the head to maintain neutral cervical alignment



### IMMOBILIZATION/POSITIONING OF FRACTURES AND DISLOCATIONS

Area/Injury	Treatment
Upper extremity	<ul style="list-style-type: none"> <li>▪ Apply sling/triangular bandage</li> <li>▪ Swathe if additional immobilization is indicated</li> </ul>
Clavicular injury/dislocation	<ul style="list-style-type: none"> <li>▪ Apply sling/triangular bandage</li> <li>▪ Swathe if additional immobilization is indicated</li> </ul>
Angulation with unimpaired circulation	<ul style="list-style-type: none"> <li>▪ Immobilize as presented</li> <li>▪ <b>Do not</b> move extremity</li> </ul>
Angulation with absent distal pulse, cyanosis	<ul style="list-style-type: none"> <li>▪ Return extremity to proper physiologic position</li> <li>▪ Apply gentle traction until pulse is restored</li> <li>▪ Splint or immobilize area, including joints proximal and distal to injury</li> <li>▪ Reassess pulses every 5–10 minutes</li> </ul>

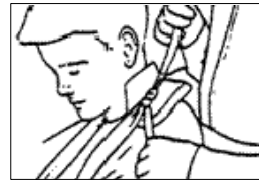
### SLING AND SWATHE IMMOBILIZATION



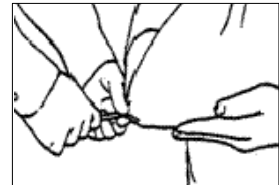
Place the arm across the chest and position as shown. Bring the bandage over the arm and behind the neck.



Adjust the length as necessary and tie the ends. The arm should be well supported, relieving pressure on the shoulder.



Place the knot so that it lies over the shoulder rather than against the cervical spine. Placing a pad under the knot will enhance comfort.



Secure the sling at the elbow with a safety pin or knot, creating a pocket in which the elbow rests securely. Reassess neurovascular integrity.



If further immobilization is needed to secure the extremity and a second bandage is available, swathe the arm as permitted by applicable protocols. Lay the second bandage flat, then fold it several times lengthwise. Use the folded bandage to swathe the injured arm against the chest wall, immobilizing it.



## Near-drowning/Submersion

### CAUTION

**Ensure scene safety! Never attempt a water rescue unless you are trained to do so.**

#### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR SUBMERSION INJURIES

- Skin assessment
- Duration of exposure
- Inspection for associated injuries

#### KEY FINDINGS

- Dyspnea, rales, rhonchi, wheezing, or apnea
- Altered LOC
- Bradycardia or asystole
- Fixed, dilated pupils
- Cyanosis/pallor
- Hypothermia, cool skin

#### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**The triage category for ALL instances of near-drowning is EMERGENT!**

#### INTERVENTIONS

- Activate EMS
- **EMS transport to ED for evaluation is REQUIRED in all cases of near-drowning!**

#### If still in water

- Do not remove student without assistance
- Keep student afloat face-up
- Support head and neck in neutral alignment with spine
- Open airway using jaw thrust and support ventilation
- When adequate assistance is available, place student supine on backboard or other rigid support for removal from water

#### If out of water

- Support ABCs (use jaw thrust technique if spinal injury is suspected)
- Assess Pediatric Glasgow Coma Scale score
- Cover student and maintain warmth to prevent hypothermia

#### In all cases

- Directly/continuously observe student
- Contact parent/guardian
- Notify school administrator
- Follow up

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## Tools for Assessing Students

**SYSTEMATIC ASSESSMENT**

*NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.*

**Scene safety assessment**

- Call for assistance as indicated

**Across-the-room assessment**

Use Pediatric Assessment Triangle (PAT)

- A**ppearance ▪ **B**reathing ▪ **C**irculation

**Initial assessment**

- Standard precautions ▪ C-spine stabilization
- A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

**History/pain assessment**

- SAMPLE** history ▪ **PQRST**/other pain assessment

**Focused physical examination**

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

**Triage**

- E**mergent ▪ **U**rgent ▪ **N**onurgent

<sup>a</sup>**Disability Assessment**

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
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Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score
<b>Eye opening</b>	Spontaneous		Spontaneous		4
	To verbal command		To shout		3
	To pain		To pain		2
	No response		No response		1
<b>Best motor response</b>	Obeys commands		Spontaneous		6
	Localizes pain		Localizes pain		5
	Flexion-withdrawal		Flexion-withdrawal		4
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2
	No response		No response		1
<b>Best verbal response</b>	<b>Older Than 5 Yr</b>		<b>2-5 Yr</b>		<b>Younger than 2 Yr</b>
	Oriented	Appropriate words/phrases	Smiles/coos appropriately		5
	Disoriented/confused	Inappropriate words	Cries, inconsolable		4
	Inappropriate words	Persistent cries/screams	Persistent inappropriate cries/screams		3
	Incomprehensible sounds	Grunts	Grunts, agitated, restless		2
No response	No response	No response		1	
					<b>Total Score</b>





## Nose Emergencies

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO  
Stabilize c-spine if head/spinal injury is suspected!**

### KEY ASSESSMENT POINTS FOR EMERGENCIES INVOLVING THE NOSE

- Mechanism of injury/events preceding episode
- Airway status
- Physical assessment/inspection for abnormalities, bleeding, drainage

### IMMEDIATE INTERVENTIONS

**Even before you determine triage category, begin to control bleeding with pressure**

### TRIAGE CATEGORY/ADDITIONAL INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

<b>EMERGENT</b>	<b>URGENT</b>	<b>NONURGENT</b>
<ul style="list-style-type: none"> <li>▪ Suspected nasal fracture with potential head/neck injury (see <i>Head/Spinal Cord</i> protocol)</li> <li>▪ Change in mental status, LOC</li> <li>▪ Airway compromise</li> <li>▪ CSF drainage</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Maintain spinal stabilization as applicable</li> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Directly/continuously observe student</li> <li>▪ Keep student calm</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Suspected nasal fracture, no possibility of head/neck injury</li> <li>▪ Tenderness on palpation</li> <li>▪ Epistaxis not controlled after 10 min</li> <li>▪ Moderate periorbital edema</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS</li> </ul> <p style="text-align: center;"><b>Prolonged epistaxis</b></p> <ul style="list-style-type: none"> <li>▪ Pinch nostrils closed and apply pressure for 10 min</li> <li>▪ If epistaxis continues, consider activating EMS</li> </ul> <p style="text-align: center;"><b>Suspected nasal fracture</b></p> <ul style="list-style-type: none"> <li>▪ Apply cold packs</li> <li>▪ See <i>Lacerations/Abrasions</i> protocol for treatment of associated wounds</li> </ul> <p style="text-align: center;"><b>In all cases</b></p> <ul style="list-style-type: none"> <li>▪ Observe student closely</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Foreign body</li> <li>▪ Controllable epistaxis</li> <li>▪ S/S of acute sinusitis:                             <ul style="list-style-type: none"> <li>• Pain/pressure over sinus areas</li> <li>• Throbbing</li> <li>• Headache, malaise, fever</li> <li>• Mucopurulent secretions</li> <li>• Mild periorbital edema</li> </ul> </li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <p style="text-align: center;"><b>Epistaxis</b></p> <ul style="list-style-type: none"> <li>▪ Pinch nostrils closed and apply pressure for 10 min</li> </ul> <p style="text-align: center;"><b>Foreign body</b></p> <ul style="list-style-type: none"> <li>▪ Have student blow nose while occluding unobstructed nostril</li> <li>▪ Attempt removal <b>only</b> if object is visible and can be grasped with forceps or fingers</li> <li>▪ During extraction, occlude nostril superior to object so that it cannot be pushed further in</li> <li>▪ If object cannot be removed, reclassify as urgent</li> </ul> <p style="text-align: center;"><b>In all cases</b></p> <ul style="list-style-type: none"> <li>▪ Observe student</li> <li>▪ Contact parent/guardian for referral to primary care physician</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.**

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- **A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- **A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- **SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- **E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

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	Localizes pain		Localizes pain		<b>5</b>	
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	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		<b>2</b>	
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	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr		
<b>Best verbal response</b>	Oriented		Appropriate words/phrases	Smiles/coos appropriately		<b>5</b>
	Disoriented/confused		Inappropriate words	Cries, inconsolable		<b>4</b>
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams		<b>3</b>
	Incomprehensible sounds		Grunts	Grunts, agitated, restless		<b>2</b>
	No response		No response	No response		<b>1</b>
<b>Total Score</b>						



## Obstetric Emergencies

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see *Assessment protocol*), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR OBSTETRIC EMERGENCIES

- Obstetric history:**
- Anticipated due date
    - Recent drug use
    - Possibility of multiple births
  - Prenatal care (name/phone # of obstetrician)
    - Delivery hospital
  - Color of amniotic fluid (clear, red, green, yellow-tinged)
  - Progression of labor
    - Bloody show/expulsion of mucous plug
    - Timing/strength of contractions
    - Inspection for crowning
    - Reported urge to move bowels

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ S/S of shock</li> <li>▪ Seizure activity (see <i>Seizures protocol</i>)</li> <li>▪ S/S of preeclampsia:                             <ul style="list-style-type: none"> <li>• BP equals or exceeds 140/90 <b>or</b></li> <li>• BP elevated by 30 mm Hg (systolic) <b>or</b> 15 mm Hg (diastolic) above known baseline</li> </ul> </li> <li>▪ Crowning</li> <li>▪ Breech presentation</li> <li>▪ Prolapsed umbilical cord</li> <li>▪ Abruptio placentae</li> <li>▪ Placenta previa/vaginal bleeding</li> <li>▪ Multigravida</li> <li>▪ Premature labor</li> <li>▪ Contractions less than 10 min apart</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ For signs of shock, if delivery is <b>not</b> imminent, place in left lateral recovery position</li> <li>▪ If delivery <b>is imminent</b>, prepare for emergency delivery (see reverse for neonatal care)</li> <li>▪ Directly/continuously observe student</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pregnancy-induced hypertension</li> <li>▪ History of trauma</li> <li>▪ Active labor, amniotic sac intact</li> <li>▪ Contractions more than 10 min apart</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS</li> <li>▪ Observe student closely</li> <li>▪ Contact parent/guardian to transport student for medical care</li> <li>▪ Monitor closely</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Variable contractions</li> <li>▪ Amniotic sac intact</li> <li>▪ Vomiting with stable vital signs</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Observe student</li> <li>▪ Contact parent/guardian to transport student for medical care</li> <li>▪ Follow up</li> </ul>

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## Emergency Neonatal Care

### IMMEDIATE INTERVENTIONS

- Suction the infant’s mouth first, then the nose
- Dry the infant with a towel
- Rewrap the infant in a warmed, clean, dry towel or blanket; cover head
- Stimulate breathing by rubbing infant’s back or flicking feet
- Resuscitate if necessary according to current AHA guidelines
- Calculate Apgar score (below)

#### NOTE

Do not interrupt resuscitation procedures to calculate Apgar score.

- Directly/continuously observe student and infant
- Contact significant others per student’s request

### APGAR SCORING CRITERIA

**Unless resuscitation measures are needed, assess the baby’s Apgar score 1 minute after birth and again 5 minutes after birth. The Table summarizes categories and scoring.**

#### APGAR EVALUATION OF THE NEONATE

	Sign	0	1	2
<b>A</b>	Appearance (color)	Cyanotic or pallid	Centrally pink, extremities cyanotic	Completely pink
<b>P</b>	Pulse rate	Absent	Slower than 100 bpm	Faster than 100 bpm
<b>G</b>	Grimace (reflex irritability) <sup>a</sup>	No response	Grimace	Cough/cry/sneeze
<b>A</b>	Activity (muscle tone)	Limp	Some flexion (extremities)	Active movement
<b>R</b>	Respiratory effort	Absent	Slow/irregular	Good; cries

<sup>a</sup>In response to nasal or oral stimulation. bpm indicates beats per minute



## Respiratory Distress

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR RESPIRATORY DISTRESS

- Breathing assessment

### IMMEDIATE INTERVENTIONS

**Even before you determine triage category, perform the following actions as indicated**

- Loosen restrictive clothing
- Help student into position of comfort
- Maintain airway patency

### TRIAGE CATEGORY/ADDITIONAL INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ S/S of severe respiratory distress or failure</li> <li>▪ Apnea or dyspnea</li> <li>▪ Grunting, drooling</li> <li>▪ S/S of impending respiratory failure                             <ul style="list-style-type: none"> <li>• Cyanosis</li> <li>• Tachycardia</li> <li>• Shallow respiration</li> <li>• Decreasing LOC/restlessness</li> <li>• Hypotension</li> </ul> </li> <li>▪ S/S of airway obstruction (see <i>Foreign Body</i> protocol)</li> <li>▪ Severe asthma attack (see <i>Asthma</i> protocol)</li> <li>▪ S/S of epiglottitis (dysphagia, drooling, high fever, stridor, tripod positioning)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Maintain position of comfort</li> <li>▪ Administer high-flow O<sub>2</sub> <b>as tolerated</b> if available</li> </ul> <p style="text-align: center;"><b>Epiglottitis</b></p> <ul style="list-style-type: none"> <li>▪ <b>Do not</b> inspect hypopharynx</li> <li>▪ Keep student calm</li> </ul> <p style="text-align: center;"><b>Respiratory failure</b></p> <ul style="list-style-type: none"> <li>▪ Assist ventilation via mouth-to-mask</li> <li>▪ Anticipate need for CPR</li> </ul> <p style="text-align: center;"><b>In all cases</b></p> <ul style="list-style-type: none"> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ S/S of moderate respiratory distress</li> <li>▪ Fever, chills</li> <li>▪ Persistent or barking cough</li> <li>▪ Stridor, wheezing</li> <li>▪ Nasal flaring</li> <li>▪ Retractions</li> <li>▪ Pleural pain</li> <li>▪ Mild to moderate asthma (see <i>Asthma Attack</i> protocol)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Determine need for EMS</li> <li>▪ Maintain position of comfort</li> <li>▪ Observe student closely</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Hyperventilation</li> <li>▪ S/S of mild URI                             <ul style="list-style-type: none"> <li>• Cough</li> <li>• Nasal congestion</li> <li>• Sore throat</li> <li>• Hoarseness</li> <li>• Low-grade fever</li> </ul> </li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <p><b>For hyperventilation</b></p> <ul style="list-style-type: none"> <li>▪ Encourage student to relax</li> </ul> <p style="text-align: center;"><b>In all cases</b></p> <ul style="list-style-type: none"> <li>▪ Observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated (send home for fever in which T exceeds 100°F/37.8°C)</li> <li>▪ Follow up</li> </ul>

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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE:** Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- **A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- **A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- **SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- **E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score	
<b>Eye opening</b>	Spontaneous		Spontaneous		<b>4</b>	
	To verbal command		To shout		<b>3</b>	
	To pain		To pain		<b>2</b>	
	No response		No response		<b>1</b>	
<b>Best motor response</b>	Obeys commands		Spontaneous		<b>6</b>	
	Localizes pain		Localizes pain		<b>5</b>	
	Flexion-withdrawal		Flexion-withdrawal		<b>4</b>	
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		<b>3</b>	
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		<b>2</b>	
	No response		No response		<b>1</b>	
	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr		
<b>Best verbal response</b>	Oriented		Appropriate words/phrases	Smiles/coos appropriately		<b>5</b>
	Disoriented/confused		Inappropriate words	Cries, inconsolable		<b>4</b>
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams		<b>3</b>
	Incomprehensible sounds		Grunts	Grunts, agitated, restless		<b>2</b>
	No response		No response	No response		<b>1</b>
<b>Total Score</b>						



## Seizures

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

- **Stabilize c-spine if head/spinal injury is suspected!**
- **Open airway as necessary, using jaw-thrust maneuver**

### KEY ASSESSMENT POINTS FOR SEIZURES

- Past health history, particularly of
  - Epilepsy
  - Syncope
  - Diabetes
- Events preceding episode, particularly head injury
- Indicators of drug overdose, meningitis, hypoglycemia (see *Diabetic Emergencies* and *Substance Abuse* protocols)

### IMMEDIATE INTERVENTIONS

**During an active seizure, perform the following actions *before* you proceed with triage:**

- Do not put anything in student's mouth—do not restrict movement in any way
- Provide privacy
- Protect student from injury

### TRIAGE CATEGORY/ADDITIONAL INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

<b>EMERGENT</b>	<b>URGENT</b>	<b>NONURGENT</b>
<ul style="list-style-type: none"> <li>▪ First-time seizure/no known history of seizures</li> <li>▪ History of seizures and medication noncompliance with no recent seizures</li> <li>▪ Seizure/series of seizures persisting more than 5 min</li> <li>▪ Associated respiratory compromise</li> <li>▪ Associated head injury or trauma</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Directly/continuously observe student</li> <li>▪ Provide psychological support</li> <li>▪ Document time, characteristics, duration of seizure</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Atypical seizure in student with history of seizures</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Determine need for EMS</li> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Check glucose if possible</li> <li>▪ Allow to rest in left lateral recovery position</li> <li>▪ Provide psychological support</li> <li>▪ Observe student closely</li> <li>▪ Document characteristics/duration of seizure</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Typical seizure in student with baseline history of frequent seizures</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ <b>Consult IHP/ECP</b></li> <li>▪ Check glucose if possible</li> <li>▪ Allow to rest in left lateral recovery position during postictal phase</li> <li>▪ Provide psychological support</li> <li>▪ Observe student</li> <li>▪ Document characteristics/duration of seizure</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ For persistent drowsiness, notify parent/guardian to transport student home</li> <li>▪ Follow up</li> </ul>

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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.**

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- **A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- **A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- **SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- **E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score	
<b>Eye opening</b>	Spontaneous		Spontaneous		<b>4</b>	
	To verbal command		To shout		<b>3</b>	
	To pain		To pain		<b>2</b>	
	No response		No response		<b>1</b>	
<b>Best motor response</b>	Obeys commands		Spontaneous		<b>6</b>	
	Localizes pain		Localizes pain		<b>5</b>	
	Flexion-withdrawal		Flexion-withdrawal		<b>4</b>	
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		<b>3</b>	
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		<b>2</b>	
	No response		No response		<b>1</b>	
	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr		
<b>Best verbal response</b>	Oriented		Appropriate words/phrases	Smiles/coos appropriately		<b>5</b>
	Disoriented/confused		Inappropriate words	Cries, inconsolable		<b>4</b>
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams		<b>3</b>
	Incomprehensible sounds		Grunts	Grunts, agitated, restless		<b>2</b>
	No response		No response	No response		<b>1</b>
<b>Total Score</b>						





## Sexual Abuse/Assault, Teen Dating Violence

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR SEXUAL ABUSE OR ASSAULT

- Psychosocial history
- Focused physical examination for injuries
- Menstrual status/possibility of pregnancy

### IMMEDIATE INTERVENTIONS

**Even before you determine triage category, perform the following actions as indicated**

- Provide a safe, nonthreatening environment
  - Ask questions that will help student recognize what has happened
  - Reinforce student's courage in seeking help
  - Try to ascertain whether sexual assault took place
- (NOTE: Any instance of suspected sexual assault requires ED treatment and local law enforcement notification)**

### TRIAGE CATEGORY/ADDITIONAL INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Thoughts of death or suicide</li> <li>▪ Severe/life-threatening injuries (see <i>Trauma</i> protocol)</li> <li>▪ Suspected sexual assault</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Directly/continuously monitor student</li> <li>▪ Refer to school counselor as appropriate</li> <li>▪ <b>Report suspicions to DCFS at 800-25-ABUSE (22873) and/or local law enforcement as appropriate</b></li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ecchymoses/injuries, not life-threatening</li> <li>▪ Alcohol/drug use</li> <li>▪ Current, previous, or potential pregnancy</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Determine need for EMS</li> <li>▪ Observe student closely</li> <li>▪ Provide support</li> <li>▪ Refer to school counselor</li> <li>▪ <b>Report suspicions to DCFS at 800-25-ABUSE (22873) and/or local law enforcement</b></li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ History of truancy</li> <li>▪ Sudden change in dress or makeup</li> <li>▪ Difficulty making decisions</li> <li>▪ Abrupt changes in mood/personality</li> <li>▪ Combative, possessive, or jealous behavior</li> <li>▪ Withdrawal/self-isolation</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Refer to school counselor</li> <li>▪ Observe student's behavior with others</li> <li>▪ Document findings</li> <li>▪ Provide support</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ <b>Report suspicions to DCFS at 800-25-ABUSE (22873) and/or local law enforcement</b></li> <li>▪ Follow up</li> </ul>

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## Tools for Assessing Students

**SYSTEMATIC ASSESSMENT**

*NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.*

**Scene safety assessment**

- Call for assistance as indicated

**Across-the-room assessment**

Use Pediatric Assessment Triangle (PAT)

- A**ppearance ▪ **B**reathing ▪ **C**irculation

**Initial assessment**

- Standard precautions ▪ C-spine stabilization
- A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

**History/pain assessment**

- SAMPLE** history ▪ **PQRST**/other pain assessment

**Focused physical examination**

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

**Triage**

- E**mergent ▪ **U**rgent ▪ **N**onurgent

<sup>a</sup>**Disability Assessment**

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score
<b>Eye opening</b>	Spontaneous		Spontaneous		4
	To verbal command		To shout		3
	To pain		To pain		2
	No response		No response		1
<b>Best motor response</b>	Obeys commands		Spontaneous		6
	Localizes pain		Localizes pain		5
	Flexion-withdrawal		Flexion-withdrawal		4
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2
	No response		No response		1
<b>Best verbal response</b>	<b>Older Than 5 Yr</b>		<b>2-5 Yr</b>		
	Oriented		Appropriate words/phrases	Smiles/coos appropriately	5
	Disoriented/confused		Inappropriate words	Cries, inconsolable	4
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams	3
	Incomprehensible sounds		Grunts	Grunts, agitated, restless	2
No response		No response	No response	1	
<b>Total Score</b>					



## Sickle Cell Anemia

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR SICKLE CELL ANEMIA

- Past health history, including recent illness
- Last food/drink (likelihood of dehydration)
  - Events leading up to episode, including exposure to temperature extremes
- Focused physical examination/palpation for localized pain, edema, other abnormalities

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

<p style="text-align: center;"><b>EMERGENT</b></p> <ul style="list-style-type: none"> <li>▪ Fever (T exceeds 100°F/37.8°C)</li> <li>▪ S/S of infection, sepsis</li> <li>▪ Severe, continuous pain in extremities, back, chest, or abdomen</li> <li>▪ Seizure activity (see <i>Seizures</i> protocol)</li> <li>▪ Change in mental status, LOC</li> <li>▪ Dyspnea</li> <li>▪ Chest pain</li> <li>▪ Priapism/penile pain</li> <li>▪ Severe splenomegaly and S/S of shock</li> <li>▪ Pallor, lethargy with other abnormal findings</li> <li>▪ S/S of impending respiratory collapse:                             <ul style="list-style-type: none"> <li>• Cyanosis</li> <li>• Tachycardia</li> <li>• Shallow respiration</li> <li>• Decreasing LOC/restlessness</li> <li>• Hypotension</li> <li>• Decreased breath sounds</li> </ul> </li> <li>▪ Respiratory distress (acute chest syndrome)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ <b>Refer to IHP/ECP</b></li> <li style="padding-left: 20px;"><b>Respiratory distress/shock</b></li> <li>▪ Administer high-flow O<sub>2</sub> if available</li> <li>▪ Help to maintain position of comfort (shock position as indicated)</li> <li style="padding-left: 20px;"><b>In all cases</b></li> <li>▪ Directly/continuously observe student</li> <li>▪ Reassess vital signs every 5 min</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><b>URGENT</b></p> <ul style="list-style-type: none"> <li>▪ Fever (T exceeds 100°F/37.8°C)</li> <li>▪ Mild to moderate pain</li> <li>▪ Severe edema/tenderness of affected areas</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Determine need for EMS</li> <li>▪ <b>Refer to IHP/ECP</b></li> <li>▪ Provide oral hydration (4–8 oz/hour)</li> <li>▪ Allow to rest</li> <li>▪ Elevate affected extremity</li> <li>▪ Observe student closely</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Educate student about need for good oral hydration, protection from temperature extremes</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><b>NONURGENT</b></p> <ul style="list-style-type: none"> <li>▪ Minor localized pain</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ <b>Refer to IHP/ECP</b></li> <li>▪ Provide oral hydration (4–8 oz/hour)</li> <li>▪ Allow to rest</li> <li>▪ Reassess pain</li> <li>▪ Contact parent/guardian</li> <li>▪ Observe student</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Reassess every 2 hr if student remains at school</li> <li>▪ Educate student about need for good hydration, protection from temperature extremes</li> <li>▪ Follow up</li> </ul>
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Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

		1 Yr or Older		Younger than 1 Yr		Score	
<b>Eye opening</b>	Spontaneous			Spontaneous		4	
	To verbal command			To shout		3	
	To pain			To pain		2	
	No response			No response		1	
<b>Best motor response</b>	Obeys commands			Spontaneous		6	
	Localizes pain			Localizes pain		5	
	Flexion-withdrawal			Flexion-withdrawal		4	
	Flexion-abnormal (decorticate rigidity)			Flexion-abnormal (decorticate rigidity)		3	
	Extension (decerebrate rigidity)			Extension (decerebrate rigidity)		2	
	No response			No response		1	
		Older Than 5 Yr		2-5 Yr		Younger than 2 Yr	
<b>Best verbal response</b>	Oriented			Appropriate words/phrases			5
	Disoriented/confused			Inappropriate words			4
	Inappropriate words			Persistent cries/screams			3
	Incomprehensible sounds			Grunts			2
	No response			No response			1
<b>Total Score</b>							



## Substance Abuse

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR SUBSTANCE ABUSE

- Respiratory assessment
  - Orientation to person/place/time
  - Ability to recall event/injuries incurred
- Type/amount of substance involved (request medication/drug container if available)
- Time/route of exposure (dermal, ocular, inhalation, ingestion)
- Underlying health problems (**SAMPLE** history)
- Other students involved

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Respiratory/cardiac arrest</li> <li>▪ Unconscious/can't be roused</li> <li>▪ Change in LOC</li> <li>▪ Labored/shallow breathing</li> <li>▪ Hallucinations, violent behavior, extreme agitation</li> <li>▪ S/S of trauma or injury</li> <li>▪ Seizure activity (see <i>Seizures</i> protocol)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Initiate CPR as appropriate</li> <li>▪ Activate EMS</li> <li>▪ Place student in left lateral recovery position</li> <li>▪ Directly/continuously observe student</li> <li>▪ Monitor airway/respiratory status</li> <li>▪ See <i>Trauma</i> protocol as appropriate</li> <li>▪ Contact PCC as indicated<sup>a</sup></li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Initiate counseling/support measures per school policy</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Somnolence, emesis, unusual behavior</li> <li>▪ Unsteady gait</li> <li>▪ Memory problems</li> <li>▪ Mild agitation/restlessness</li> <li>▪ Suspicious odors</li> <li>▪ Needle marks/drug residue on skin, nose, clothes</li> <li>▪ Previous loss of consciousness</li> <li>▪ Complicating health problems</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS</li> <li>▪ Observe student continuously</li> <li>▪ Give nothing by mouth</li> <li>▪ Remain with student</li> <li>▪ See <i>Trauma</i> protocol as appropriate</li> <li>▪ Contact PCC as indicated<sup>a</sup></li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Notify school administrator</li> <li>▪ Initiate counseling/support measures per school policy</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Coherent and oriented</li> <li>▪ Stable vital signs</li> <li>▪ No loss of consciousness</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Observe student</li> <li>▪ Remain with student</li> <li>▪ Contact PCC as indicated<sup>a</sup></li> <li>▪ Notify school administrator</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Initiate counseling/support measures per school policy</li> <li>▪ Follow up</li> </ul>

<sup>a</sup>When calling the Poison Control Center (800-222-1222), identify yourself as a health care professional and provide the following information: your name and phone number; student's name, age, weight, and vital signs; substance involved (if known); amount, time, route, and duration of exposure; abnormal S/S; first aid and immediate interventions rendered.

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## Tools for Assessing Students

**SYSTEMATIC ASSESSMENT**

*NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.*

**Scene safety assessment**

- Call for assistance as indicated

**Across-the-room assessment**

Use Pediatric Assessment Triangle (PAT)

- A**ppearance ▪ **B**reathing ▪ **C**irculation

**Initial assessment**

- Standard precautions ▪ C-spine stabilization
- A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

**History/pain assessment**

- SAMPLE** history ▪ **PQRST**/other pain assessment

**Focused physical examination**

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

**Triage**

- E**mergent ▪ **U**rgent ▪ **N**onurgent

<sup>a</sup>**Disability Assessment**

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score
<b>Eye opening</b>	Spontaneous		Spontaneous		4
	To verbal command		To shout		3
	To pain		To pain		2
	No response		No response		1
<b>Best motor response</b>	Obeys commands		Spontaneous		6
	Localizes pain		Localizes pain		5
	Flexion-withdrawal		Flexion-withdrawal		4
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2
	No response		No response		1
<b>Best verbal response</b>	<b>Older Than 5 Yr</b>		<b>2-5 Yr</b>		
	Oriented		Appropriate words/phrases	Smiles/coos appropriately	5
	Disoriented/confused		Inappropriate words	Cries, inconsolable	4
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams	3
	Incomprehensible sounds		Grunts	Grunts, agitated, restless	2
No response		No response	No response	1	
<b>Total Score</b>					



## Suicide Prevention

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR POTENTIAL SUICIDE

##### Focused Psychosocial Examination/Risk Factor Assessment

###### *Precipitating events*

- Parents recently divorced
  - Multiple life stressors
- Recent breakup with girlfriend or boyfriend
  - Unplanned pregnancy

###### *Preparatory actions*

- Acquiring the means
  - Putting affairs in order
    - Suicide talk
- Giving away prized possessions
- Precautions against discovery

###### *Current Symptoms*

- Hopelessness/powerlessness
- Depressed mood
- Suicidal ideation
- Abrupt change in personality

###### *History*

- Previous suicide attempts
- Affective disorders or conduct disorder
- Family history of mental illness, suicidal behavior, or affective disorders
- Alcoholism or substance abuse
- Chronic health condition

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

<p style="text-align: center;"><b>EMERGENT</b></p> <ul style="list-style-type: none"> <li>▪ Thoughts of death</li> <li>▪ Suicide plan, preparations</li> <li>▪ Suicide attempt</li> <li>▪ Previous suicide attempt</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs as indicated</li> <li>▪ Activate EMS</li> <li>▪ Remove personal effects</li> <li>▪ <b>Do not leave student alone under any circumstances!</b></li> <li>▪ Listen to student carefully</li> <li>▪ Take conversation seriously</li> <li>▪ Notify crisis response team</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><b>URGENT</b></p> <ul style="list-style-type: none"> <li>▪ Suicidal ideation</li> <li>▪ Depression</li> <li>▪ Withdrawal</li> <li>▪ Self-blame</li> <li>▪ Self-reproach</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS</li> <li>▪ <b>Remain with student at all times</b></li> <li>▪ Listen to student</li> <li>▪ Notify crisis response team</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<p style="text-align: center;"><b>NONURGENT</b></p> <ul style="list-style-type: none"> <li>▪ Frequent physical complaints</li> <li>▪ Sad affect</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Observe student regularly</li> <li>▪ Refer to school counselor</li> <li>▪ Notify crisis response team of your concerns and findings</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>
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## Tools for Assessing Students

**SYSTEMATIC ASSESSMENT**

*NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.*

**Scene safety assessment**

- Call for assistance as indicated

**Across-the-room assessment**

Use Pediatric Assessment Triangle (PAT)

- A**ppearance ▪ **B**reathing ▪ **C**irculation

**Initial assessment**

- Standard precautions ▪ C-spine stabilization
- A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

**History/pain assessment**

- SAMPLE** history ▪ **PQRST**/other pain assessment

**Focused physical examination**

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

**Triage**

- E**mergent ▪ **U**rgent ▪ **N**onurgent

<sup>a</sup>**Disability Assessment**

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score
<b>Eye opening</b>	Spontaneous		Spontaneous		4
	To verbal command		To shout		3
	To pain		To pain		2
	No response		No response		1
<b>Best motor response</b>	Obeys commands		Spontaneous		6
	Localizes pain		Localizes pain		5
	Flexion-withdrawal		Flexion-withdrawal		4
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2
	No response		No response		1
<b>Best verbal response</b>	<b>Older Than 5 Yr</b>		<b>2-5 Yr</b>		
	Oriented		Appropriate words/phrases	Smiles/coos appropriately	5
	Disoriented/confused		Inappropriate words	Cries, inconsolable	4
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams	3
	Incomprehensible sounds		Grunts	Grunts, agitated, restless	2
No response		No response	No response	1	
<b>Total Score</b>					





## Syncope/Unconsciousness

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO  
Stabilize c-spine if head/spinal injury is suspected!**

#### KEY ASSESSMENT POINTS FOR SYNCOPE

- Mental status/neurologic assessment
  - Psychosocial history
- Past health history/current menstrual status
- Medications taken
- Events leading up to episode, including activities, weather conditions
- Last food/drink taken

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Acute change from baseline mental status/LOC</li> <li>▪ Irregular pulse</li> <li>▪ Acute neurologic deficit</li> <li>▪ Head injury/headache with altered LOC or vomiting</li> <li>▪ Severe headache with altered LOC</li> <li>▪ Head injury/history of anemia, hemophilia, other coagulopathy</li> <li>▪ Associated seizure activity (see <i>Seizures</i> protocol)</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Maintain c-spine stabilization as applicable</li> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Directly/continuously observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Possible VP shunt dysfunction</li> <li>▪ Orthostatic vital signs<sup>a</sup></li> <li>▪ S/S of moderate hypoglycemia</li> <li>▪ Signs of dehydration</li> <li>▪ Severe headache <b>without</b> altered LOC</li> <li>▪ Persistent or severe dizziness</li> <li>▪ Exercise-induced syncope (possible cardiac etiology)</li> <li>▪ Possible medication reaction <b>without</b> emergent findings</li> <li>▪ History of substance abuse or eating disorder</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs as indicated</li> <li>▪ Determine need for EMS</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Closely observe student</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Hyperventilation</li> <li>▪ Vasovagal reaction to anxiety/pain or other known trigger</li> <li>▪ Exposure to ambient heat</li> <li>▪ Evidence of carotid sinus reaction (eg, subsequent to neck hold by classmate)</li> <li>▪ No associated injuries</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Place student supine</li> <li>▪ Allow student to wake spontaneously</li> <li>▪ For hyperventilation, encourage student to relax</li> <li>▪ Observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

#### <sup>a</sup>Orthostatic vital signs

Assess BP and HR while student is supine. Have student sit up or stand and reassess 1 min later. If BP decreases by more than 20 mm Hg or HR increases by 20 bpm, orthostasis is present. **Note: Syncopal episodes that are not associated with rising or standing require further evaluation.**

See the following protocols as appropriate:

- *Diabetic Emergencies*
- *Head/Spinal Cord Trauma*
- *Heat-related Injuries*
- *Hemophilia*
- *Increased ICP in a Student With a VP Shunt*
- *Seizures*
- *Trauma*

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## Tools for Assessing Students

### SYSTEMATIC ASSESSMENT

**NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.**

#### Scene safety assessment

- Call for assistance as indicated

#### Across-the-room assessment

Use Pediatric Assessment Triangle (PAT)

- **A**ppearance ▪ **B**reathing ▪ **C**irculation

#### Initial assessment

- Standard precautions ▪ C-spine stabilization
- **A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

#### History/pain assessment

- **SAMPLE** history ▪ **PQRST**/other pain assessment

#### Focused physical examination

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

#### Triage

- **E**mergent ▪ **U**rgent ▪ **N**onurgent

#### <sup>a</sup>Disability Assessment

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score	
<b>Eye opening</b>	Spontaneous		Spontaneous		<b>4</b>	
	To verbal command		To shout		<b>3</b>	
	To pain		To pain		<b>2</b>	
	No response		No response		<b>1</b>	
<b>Best motor response</b>	Obeys commands		Spontaneous		<b>6</b>	
	Localizes pain		Localizes pain		<b>5</b>	
	Flexion-withdrawal		Flexion-withdrawal		<b>4</b>	
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		<b>3</b>	
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		<b>2</b>	
	No response		No response		<b>1</b>	
	Older Than 5 Yr		2-5 Yr	Younger than 2 Yr		
<b>Best verbal response</b>	Oriented		Appropriate words/phrases	Smiles/coos appropriately		<b>5</b>
	Disoriented/confused		Inappropriate words	Cries, inconsolable		<b>4</b>
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams		<b>3</b>
	Incomprehensible sounds		Grunts	Grunts, agitated, restless		<b>2</b>
	No response		No response	No response		<b>1</b>
<b>Total Score</b>						



## Throat Emergencies

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see reverse), performing interventions AS YOU GO**  
**KEY ASSESSMENT POINTS FOR THROAT EMERGENCIES**

- Across-the-room assessment (note tripod positioning)
  - Respiratory assessment
- Events preceding illness/suddenness of onset
- Focused physical examination with inspection of pharynx, palpation of lymph nodes

### IMMEDIATE INTERVENTIONS

**Even before you determine triage category, perform the following actions as indicated**

- Loosen restrictive clothing
- Help student into position of comfort
- Maintain airway patency

### TRIAGE CATEGORY/ADDITIONAL INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Airway compromise</li> <li>▪ Change in mental status, LOC</li> <li>▪ S/S of epiglottitis:                             <ul style="list-style-type: none"> <li>• Sudden onset</li> <li>• Stridor, drooling, dysphagia</li> <li>• High fever</li> </ul> </li> <li>▪ Anaphylactic reaction (see <i>Anaphylaxis</i> protocol)</li> <li>▪ S/S of retropharyngeal abscess:                             <ul style="list-style-type: none"> <li>• Fever</li> <li>• Stiff, painful neck</li> <li>• Asymmetric edema of posterior pharyngeal wall</li> <li>• Dyspnea</li> </ul> </li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Activate EMS</li> <li>▪ Support ABCs</li> <li>▪ Keep student calm</li> <li>▪ Administer high-flow O<sub>2</sub> <b>as tolerated</b> if available</li> </ul> <p style="text-align: center;"><b>Epiglottitis</b></p> <ul style="list-style-type: none"> <li>▪ <b>Do not</b> inspect hypopharynx</li> <li>▪ Maintain position of comfort</li> </ul> <p style="text-align: center;"><b>In all cases</b></p> <ul style="list-style-type: none"> <li>▪ Directly/continuously observe student</li> <li>▪ Reassess vital signs every 5 min</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ S/S of peritonsillar abscess:                             <ul style="list-style-type: none"> <li>• Severe pain</li> <li>• Fever</li> </ul> </li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Determine need for EMS</li> <li>▪ Maintain position of comfort</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Observe student closely</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Swollen, tender lymph nodes</li> <li>▪ S/S of tonsillitis/pharyngitis:                             <ul style="list-style-type: none"> <li>• Tonsillar exudate</li> <li>• Erythema</li> <li>• Deviation of tonsils toward midline</li> </ul> </li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Observe student</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated (send home for fever exceeding 100°F/37.8°C)</li> <li>▪ Follow up</li> </ul>

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## Tools for Assessing Students

**SYSTEMATIC ASSESSMENT**

*NOTE: Perform interventions AS YOU GO. Determine triage/activate EMS at EARLIEST INDICATION of need.*

**Scene safety assessment**

- Call for assistance as indicated

**Across-the-room assessment**

Use Pediatric Assessment Triangle (PAT)

- A**ppearance ▪ **B**reathing ▪ **C**irculation

**Initial assessment**

- Standard precautions ▪ C-spine stabilization
- A**irway ▪ **B**reathing ▪ **C**irculation ▪ **D**isability<sup>a</sup> ▪ **E**xposure

**History/pain assessment**

- SAMPLE** history ▪ **PQRST**/other pain assessment

**Focused physical examination**

- Vital signs, temperature, weight, blood glucose
- Inspect ▪ auscultate ▪ palpate

**Triage**

- E**mergent ▪ **U**rgent ▪ **N**onurgent

<sup>a</sup>**Disability Assessment**

- Assess responsiveness (**AVPU**):
  - A** Alert
  - V** Responds to **V**erbal stimulus
  - P** Responds to **P**ainful stimulus
  - U** Unresponsive
- Assess pupils
- Assess for transient paresthesia

### PEDIATRIC VITAL SIGNS BY AGE

Age	RR	HR	BP
Neonate (0-30 days)	30-60	100-180	50-90
Infant (1-12 mo)	24-50	100-160	60-100
Toddler (1-3 yr)	24-40	90-150	80-105
Preschooler (3-5 yr)	20-30	80-140	95-105
School-aged (5-12 yr)	18-30	65-120	95-120
Adolescent (12 yr /up)	12-20	60-100	100-128

**RR indicates respiratory rate; HR, heart rate; BP, systolic blood pressure (mm Hg)**

### INDICATORS OF CARDIOPULMONARY COMPROMISE IN CHILDREN

- Tachycardia
- Weak, thready, or absent peripheral pulses
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia (ominous sign)
- No palpable BP (ominous sign)

### PEDIATRIC GLASGOW COMA SCALE

	1 Yr or Older		Younger than 1 Yr		Score
<b>Eye opening</b>	Spontaneous		Spontaneous		4
	To verbal command		To shout		3
	To pain		To pain		2
	No response		No response		1
<b>Best motor response</b>	Obeys commands		Spontaneous		6
	Localizes pain		Localizes pain		5
	Flexion-withdrawal		Flexion-withdrawal		4
	Flexion-abnormal (decorticate rigidity)		Flexion-abnormal (decorticate rigidity)		3
	Extension (decerebrate rigidity)		Extension (decerebrate rigidity)		2
	No response		No response		1
<b>Best verbal response</b>	<b>Older Than 5 Yr</b>		<b>2-5 Yr</b>		
	Oriented		Appropriate words/phrases	Smiles/coos appropriately	5
	Disoriented/confused		Inappropriate words	Cries, inconsolable	4
	Inappropriate words		Persistent cries/screams	Persistent inappropriate cries/screams	3
	Incomprehensible sounds		Grunts	Grunts, agitated, restless	2
No response		No response	No response	1	
<b>Total Score</b>					



## Toxic Exposure (Ingestion/Environmental)

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see *Assessment protocol*), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR TOXIC EXPOSURES

- Assess/ensure scene safety (notify school administrator as indicated to activate hazmat protocols)
  - Respiratory assessment
  - Skin assessment
- LOC/neurologic assessment, including PERRLA
  - Type/amount of substance (get container if available)
    - Time/route of exposure (dermal, ocular, inhalation, ingestion)
- Location where exposure occurred
- Subsequent S/S, especially respiratory status, LOC, emesis
- Ability to recall event, including injuries incurred
- Underlying health problems (**SAMPLE** history)
- Focused physical assessment, including injury, odors
- Other students involved

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

Refer to Toxidrome table (see reverse)

<b>EMERGENT</b>	<b>URGENT</b>	<b>NONURGENT</b>
<ul style="list-style-type: none"> <li>▪ Respiratory arrest</li> <li>▪ Seizures (see <i>Seizures</i> protocol)</li> <li>▪ Loss of consciousness</li> <li>▪ Dyspnea, severe respiratory distress</li> <li>▪ Signs of shock/hypotension</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Initiate CPR as necessary</li> <li>▪ Contact PCC<sup>a</sup></li> <li>▪ Refer for medical care as recommended by PCC</li> <li>▪ Send MSDS and substance (if possible) to ED with student</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Unusual behavior</li> <li>▪ History of emesis</li> <li>▪ Minor abnormal findings</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS</li> <li>▪ Contact PCC<sup>a</sup></li> <li>▪ Refer for medical care as recommended by PCC</li> <li>▪ Consult MSDS</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Asymptomatic</li> <li>▪ Stable vital signs</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Observe student</li> <li>▪ Consult MSDS</li> <li>▪ Contact PCC<sup>a</sup></li> <li>▪ Refer for medical care as recommended by PCC</li> <li>▪ Provide supportive care as indicated</li> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul>

#### NOTE

<sup>a</sup>**When calling the Poison Control Center (800-222-1222), identify yourself as a health care professional and provide the following information: your name and phone number; student's name, age, weight, and vital signs; substance involved (if known); amount, time, route, and duration of exposure; abnormal S/S; first aid and immediate interventions rendered.**

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## Toxidromes

If assessment findings suggest a toxic ingestion and you do not know what substance is involved, it may be helpful to look for signs of identifiable toxic syndromes (*toxidromes*). Toxidromes involve a recognizable group of signs and symptoms that tend to occur consistently with particular toxins. The Table describes the 4 major toxidromes and provides mnemonics that can help you remember the associated findings. Examples of substances that can cause each toxidrome are also included.

### TOXIDROMES

Toxidrome	Clinical Findings	Causative Substances
Opioid	<ul style="list-style-type: none"> <li>▪ Constricted pupils</li> <li>▪ CNS depression</li> <li>▪ Respiratory depression</li> </ul>	<ul style="list-style-type: none"> <li>▪ Heroin</li> <li>▪ Codeine</li> <li>▪ Fentanyl</li> <li>▪ Methadone</li> </ul>
Sympathomimetic	<ul style="list-style-type: none"> <li>▪ Hypertension</li> <li>▪ Tachycardia</li> <li>▪ Hyperthermia</li> <li>▪ Diaphoresis</li> <li>▪ Dilated pupils</li> </ul>	<ul style="list-style-type: none"> <li>▪ Epinephrine</li> <li>▪ OTC diet aids</li> <li>▪ Amphetamines</li> <li>▪ Oral decongestants (eg, pseudoephedrine)</li> <li>▪ Bronchodilators</li> </ul>
Anticholinergic <i>Listed phrases may help you recall clinical findings</i>	<ul style="list-style-type: none"> <li>▪ Hyperthermia (<i>Hot as a hare</i>)</li> <li>▪ Flushed skin (<i>Red as a beet</i>)</li> <li>▪ Hypertension, dry skin (<i>Dry as a bone</i>)</li> <li>▪ Delirium (<i>Mad as a hatter</i>)</li> <li>▪ Dilated pupils (<i>Blind as a bat</i>)</li> <li>▪ Urinary retention (<i>Full as a flask</i>)</li> <li>▪ Tachycardia</li> <li>▪ Absent bowel sounds</li> </ul>	<ul style="list-style-type: none"> <li>▪ Antihistamines</li> <li>▪ GI antispasmodics</li> <li>▪ Certain toxic plants (eg, jimson weed, deadly nightshade, amanita muscaria)</li> <li>▪ Certain toxic mushrooms</li> <li>▪ Atropine</li> <li>▪ Tricyclic antidepressants</li> </ul>
Cholinergic	<ul style="list-style-type: none"> <li>▪ <b>D</b>iarrhea</li> <li>▪ <b>U</b>rination</li> <li>▪ <b>M</b>iosis, <b>M</b>uscle fasciculations</li> <li>▪ <b>B</b>radycardia, <b>B</b>ronchorrhea</li> <li>▪ <b>E</b>mesis</li> <li>▪ <b>L</b>acrimation</li> <li>▪ <b>S</b>alivation, <b>S</b>weating</li> <li>▪ Weakness</li> </ul>	<ul style="list-style-type: none"> <li>▪ Organophosphate and carbamate insecticides</li> <li>▪ Mushrooms containing muscarine (imocybe species, amanita species, ibotenic muscimol)</li> <li>▪ Physostigmine</li> </ul>

CNS indicates central nervous system; OTC, over-the-counter; GI, gastrointestinal



# Trauma

## SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see *Assessment* protocol), performing interventions AS YOU GO**  
**Ensure scene safety before approaching**  
**Stabilize c-spine if head/spinal injury is suspected**

## TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Slow or fast RR, other S/S of respiratory distress/failure</li> <li>▪ Capillary refill exceeds 2 seconds, other S/S of shock</li> <li>▪ Currently/previously unconscious</li> <li>▪ Profuse hemorrhage</li> <li>▪ Penetrating wound or significant blunt trauma to head, chest, or abdomen</li> <li>▪ Open chest wound</li> <li>▪ Suspected pelvic/femoral fracture</li> <li>▪ Suspected spinal injury with paresthesia</li> <li>▪ Amputation/crush injury</li> <li>▪ S/S of intra-abdominal injury:                             <ul style="list-style-type: none"> <li>• Hematuria</li> <li>• Grey Turner sign (bluish discoloration of flank/periumbilical area)</li> <li>• Abdominal asymmetry/distention</li> <li>• Tenderness/guarding/pain on gentle palpation</li> </ul> </li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Activate EMS</li> <li>▪ Maintain spinal stabilization</li> <li>▪ Place supine or in shock position</li> <li>▪ Keep student warm</li> <li>▪ Give nothing by mouth</li> <li>▪ Stabilize impaled object with dressings—<b>do not remove</b></li> <li>▪ Splint/elevate suspected fracture</li> <li>▪ Control hemorrhage</li> <li>▪ Directly/continuously observe</li> <li>▪ Frequently reassess vital signs/<b>AVPU</b></li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Follow up</li> </ul> <p style="text-align: center;"><b>Amputation management</b></p> <ul style="list-style-type: none"> <li>▪ Wrap part in gauze slightly moistened with sterile saline</li> <li>▪ Place in plastic bag, seal securely, and label</li> <li>▪ Place bag on cold packs for transport</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stable vital signs</li> <li>▪ No loss of consciousness</li> <li>▪ Deformity/suspected closed fracture without neurovascular compromise</li> <li>▪ Controllable bleeding</li> <li>▪ Significant mechanism of injury without other significant abnormalities</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Support ABCs</li> <li>▪ Reassess vital signs</li> <li>▪ Determine need for EMS</li> <li>▪ Control bleeding</li> <li>▪ Proceed with detailed physical examination</li> <li>▪ Splint/immobilize suspected fractures, elevate extremity, and apply cold packs</li> </ul> <p style="text-align: center;"><b>Blunt abdominal injury</b></p> <ul style="list-style-type: none"> <li>▪ Observe closely 15 min for S/S of intra-abdominal injury (listed under Emergent)</li> <li>▪ Reassess in 1 hour or if S/S recur</li> </ul> <p style="text-align: center;"><b>In all cases</b></p> <ul style="list-style-type: none"> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stable vital signs</li> <li>▪ No deformity or suspicion of fracture</li> <li>▪ Minor abrasions or lacerations</li> <li>▪ Mild muscle strain or sprain</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Proceed with detailed physical examination</li> <li>▪ Refer to appropriate protocol<sup>a</sup></li> </ul> <p style="text-align: center;"><b>Blunt abdominal injury</b></p> <ul style="list-style-type: none"> <li>▪ Observe closely 15 min for S/S of intra-abdominal injury (see Emergent)</li> <li>▪ Reassess in 1 hour or if S/S recur</li> </ul> <p style="text-align: center;"><b>In all cases</b></p> <ul style="list-style-type: none"> <li>▪ Contact parent/guardian</li> <li>▪ Return student to class or send home as indicated</li> <li>▪ Follow up</li> </ul>

<sup>a</sup>See protocols as appropriate: ▪ *Abdominal* ▪ *Burns* ▪ *Chest Trauma* ▪ *Head/Spinal Cord* ▪ *Lacerations/Abrasions* ▪ *Musculoskeletal*

**NOTE**  
**Refer student for tetanus booster if it has been 5 years or more since the last vaccination. Tetanus booster is recommended every 10 years.**

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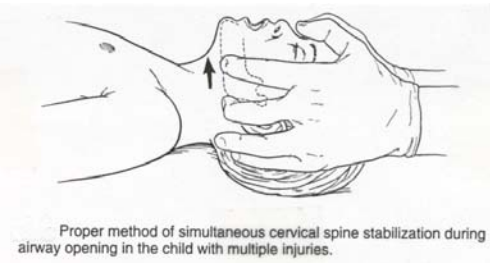




## Interventions for Musculoskeletal Trauma

### MANUAL CERVICAL SPINE STABILIZATION

- Position student supine
- Place both hands along lateral aspect of student's head
- Position the head so that the neck is in neutral alignment with the spine
- Continue to support the head to maintain neutral cervical alignment



### IMMOBILIZATION/POSITIONING OF FRACTURES AND DISLOCATIONS

Area/Injury	Treatment
Upper extremity	<ul style="list-style-type: none"> <li>▪ Apply sling/triangular bandage</li> <li>▪ Swathe if additional immobilization is indicated</li> </ul>
Clavicular injury/dislocation	<ul style="list-style-type: none"> <li>▪ Apply sling/triangular bandage</li> <li>▪ Swathe if additional immobilization is indicated</li> </ul>
Angulation with unimpaired circulation	<ul style="list-style-type: none"> <li>▪ Immobilize as presented</li> <li>▪ <b>Do not</b> move extremity</li> </ul>
Angulation with absent distal pulse, cyanosis	<ul style="list-style-type: none"> <li>▪ Return extremity to proper physiologic position</li> <li>▪ Apply gentle traction until pulse is restored</li> <li>▪ Splint or immobilize area, including joints proximal and distal to injury</li> <li>▪ Reassess pulses every 5–10 minutes</li> </ul>

### SLING AND SWATHE IMMOBILIZATION



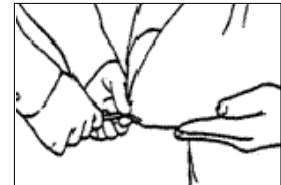
Place the arm across the chest and position as shown. Bring the bandage over the arm and behind the neck.



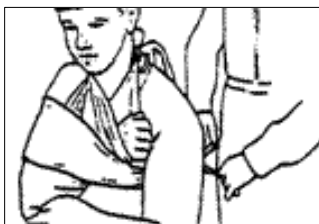
Adjust the length as necessary and tie the ends. The arm should be well supported, relieving pressure on the shoulder.



Place the knot so that it lies over the shoulder rather than against the cervical spine. Placing a pad under the knot will enhance comfort.



Secure the sling at the elbow with a safety pin or knot, creating a pocket in which the elbow rests securely. Reassess neurovascular integrity.



If further immobilization is needed to secure the extremity and a second bandage is available, swathe the arm as permitted by applicable protocols. Lay the second bandage flat, then fold it several times lengthwise. Use the folded bandage to swathe the injured arm against the chest wall, immobilizing it.





## Violent Behavior

### SYSTEMATIC ASSESSMENT

**Begin the 5 components of assessment (see *Assessment protocol*), performing interventions AS YOU GO**

#### KEY ASSESSMENT POINTS FOR VIOLENT INCIDENTS

- Assess/ensure scene safety before approaching (notify police liaison/security)
- Perform cross-the-room assessment followed by mental status examination (below)
  - **Appearance:** general; grooming; posture
  - **Mood:** cooperative, frightened, irritable
    - **Speech:** soft/loud, fast, slurred
  - **Behavior:** fidgeting, pacing, eye contact
  - **Memory:** recent memory/immediate recall
    - **Orientation:** realistically oriented to person/place/time
- **Thought process:** mental activity; evidence of delusions/hallucinations
- **Thought content:** what the student says; suicidal ideation, hopelessness
- **Insight:** recognizes responsibilities or blames others for problems
- **Judgment:** decision-making ability (superficial, impulsive)
- **Perception:** awareness of self and thoughts (guilt, indecisiveness)

### TRIAGE CATEGORY/APPROPRIATE INTERVENTIONS

**Determine triage category and activate EMS AS SOON AS the need becomes apparent!**

EMERGENT	URGENT	NONURGENT
<ul style="list-style-type: none"> <li>▪ Danger to self/others</li> <li>▪ Brandishing weapon</li> <li>▪ Physical cues indicate escalation</li> <li>▪ Drug or alcohol intoxication</li> <li>▪ Physical restraint necessary</li> <li>▪ History of violence</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ <b>Initiate lockdown procedures</b></li> <li>▪ Activate EMS/security</li> <li>▪ Never intervene alone</li> <li>▪ See reverse for safety tips</li> <li>▪ Contact parent/guardian</li> <li>▪ Notify school administrator</li> <li>▪ Monitor behavioral progress</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Moderately agitated but not violent</li> <li>▪ Expressing verbal anger without physical aggression</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Determine need for EMS/security</li> <li>▪ Speak in low, measured tones</li> <li>▪ Explain that you know something is bothering student and you will help student control behavior</li> <li>▪ Walk with student to diffuse agitation</li> <li>▪ Repeat/restate what student says:                             <ul style="list-style-type: none"> <li>• “You’re feeling angry.”</li> <li>• “I’m concerned for you. I’m going to help you control yourself.”</li> <li>• “What do you need? What do you need to do?”</li> <li>• “When you felt like this before, what helped you?”</li> </ul> </li> <li>▪ Notify crisis response team</li> <li>▪ Contact parent/guardian to transport student to medical care or home</li> <li>▪ Monitor behavioral progress</li> <li>▪ Follow up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mildly anxious or frightened</li> <li>▪ Previously angry but now calm</li> </ul> <p style="text-align: center;"><b>INTERVENTIONS</b></p> <ul style="list-style-type: none"> <li>▪ Take student to a quiet area with backup support available</li> <li>▪ Provide reassurance as needed</li> <li>▪ Speak in low, measured tones</li> <li>▪ Contact parent/guardian</li> <li>▪ Allow student to return to class if student is calm, ready, and able to identify ways to deal with feelings; or send home as indicated</li> <li>▪ Monitor behavioral progress</li> <li>▪ Follow up</li> </ul>

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## Violent Behavior: Safety Tips

### Emergent situation

- Do not invade student's personal space (stand back at least 5 ft)
- Stand at 45° angle to student, not directly in front
- Maintain open posture
- Maintain a clear exit route
- Be prepared to move quickly
- Do not make any abrupt moves unless necessary
- Be sure student has no weapons before approaching
- Give student brief, clear, assertive directions before any action
- Establish yourself as a concerned professional
- Proceed without hesitation
- Enlist adequate, trained assistance (at least 6 people, if possible) before attempting physical restraint

### Urgent situation

- Speak in low, measured tones
- Explain that you know something is bothering student and you will help student control behavior
- Walk with student to diffuse agitation
- Repeat/restate what student says:
  - "You're feeling angry."
  - "I'm concerned for you. I'm going to help you control yourself."
  - "What do you need? What do you need to do?"
  - "When you felt like this before, what helped you?"

