Special Patient Populations for the EMT and EMT-I

2011 Georgia Office of EMS
EMT-B → EMT Update
EMT-I → EMT-I Update

Special Thanks

- Richard Kalasky
  – Jones and Bartlett Publishing
• Complications of pregnancy
• Pediatric Assessment Triangle
• Geriatrics
• Bariatrics
• Stroke Assessment

COMPLICATIONS OF PREGNANCY
Hypertensive Disorders of Pregnancy

• Pre-eclampsia and Eclampsia
  – Progressive disorder that is usually categorized as mild or severe
  – Increase in systolic blood pressure by 30 mmHg and/or a diastolic increase of 15 mmHg
    • Two or more occasions
  – Most commonly seen in the last 10 weeks of gestation, during labor, or in the first 48 hours postpartum

Eclampsia

• Same signs and symptoms plus seizures or coma
  • Tonic-clonic activity
  • Often begins as oral twitching
  • Often apnea during seizure
  • Can initiate labor
**Eclampsia—Management**

- Left lateral recumbent position
- Minimize stimulation
- Oxygen and ventilation assistance
- IV (for EMT-I and above)
- If seizures:
  - ALS Care at the paramedic level
  - Monitor vital signs

**Fetal Membrane Disorders**

- Premature rupture of membranes
  - Amniotic sac rupture before labor
  - “Trickle” or sudden gush of fluid from vagina
  - Infection possible if delivery delayed
  - Transport
The Pediatric Assessment Triangle (PAT)

• Observational assessment
• Formalizes the “general impression”
• Establishes severity of illness or injury
• Determines urgency of intervention
• Identifies general category of physiologic abnormality
The Pediatric Assessment Triangle (PAT)

- 3 parts
  - Appearance (A)
  - Work of Breathing (B)
  - Circulation to Skin (C)

- Completely Visible/Audible Assessment
  - As you walk up to the patient

Appearance

- Assess for TICLS:
  - Tone
  - Interactiveness
  - Consolability
  - Look/Gaze
  - Speech/Cry

- Abnormal:
  - Abnormal or absent cry or speech. Decreased response to parents or environmental stimuli. Floppy or rigid muscle tone or not moving.

- Normal:
  - Normal cry or speech. Responds to parents or to environmental stimuli such as lights, keys, or toys. Good muscle tone. Moves extremities well.
Work of Breathing

• Check for visible movement/respiratory effort
• **Abnormal:**
  – Increased/excessive (nasal flaring, retractions or abdominal muscle use) or decreased/absent respiratory effort or noisy breathing.
• **Normal:**
  – Breathing appears regular without excessive respiratory muscle effort or audible respiratory sounds.

Circulation to Skin

• Check for Color and Obvious Bleeding
• **Abnormal:**
  – Cyanosis, mottling, paleness/pallor or obvious significant bleeding.
• **Normal:**
  – Color appears normal for racial group of child. No significant bleeding.
PAT: Respiratory Distress

Appearance
Normal

Work of Breathing
Increased

Circulation to Skin
Normal

PAT: Respiratory Failure

Appearance
Abnormal

Work of Breathing
Increased or decreased

Circulation to Skin
Normal or abnormal
PAT: Shock

Appearance Abnormal

Work of Breathing Normal

Circulation to Skin Abnormal

PAT: Primary Central Nervous System (CNS) Dysfunction or Metabolic Abnormality

Appearance Abnormal

Work of Breathing Normal

Circulation to Skin Normal
• GEMS
  – Geriatric
  – Environmental Assessment
  – Medical Assessment
  – Social Assessment

– The following slides are from the GEMS Course – used with permission from Jones and Bartlett publishing
• “G”
  – Recognize that the patient is a *Geriatric* patient.
  – Possible problems of an aging patient
  – May present atypically

• “E”
  – *Environmental* assessment
  – Is the home too hot or too cold? Well kept and secure?
  – Are there hazardous conditions?
• “M”
  – *Medical* assessment
  – Older patients tend to have a variety of medical problems.
  – May be taking numerous medications
  – Thorough history is essential.

• “S”
  – *Social* assessment
  – May have less of a social network
  – Death of a spouse, family members, or friends
  – May need assistance with activities of daily living
General Patient Assessment

- Scene size-up includes environmental assessment:
  - General appearance, cleanliness
  - Temperature, food
  - Drugs, alcohol, signs of abuse
- Initial assessment looks for life threats:
  - Airway cannot be protected as well.
  - Breathing can be complicated by previous disease.
  - Circulatory system has slowed responses.

Mental Status Assessment

- Confusion is not normal.
- Distinguish chronic changes from new ones.
- Enlist help from family.
- Establish a baseline mental status.
- Don’t be misled.
Assessment

• Prioritize patient status.
• Detailed physical exam
• Ongoing assessment is required.

Assessing the Chief Complaint

• Determining the chief complaint can be hard.
• Start with what is bothering the patient most.
• Chief complaints may not be the life threat.
• Communication is a big component.
Chief Complaint: Shortness of Breath

- Frequently life threatening
- Often respiratory or cardiac in origin
- Can occur for other reasons such as pain, bleeding, medications
- Are there associated signs and symptoms?
- Does patient have a history of respiratory complaints?

Chief Complaint: Chest Pain

- Often cardiac in nature
- Many experience pain differently.
- Medication history is important.
- Have the patient locate the pain.
- Expose the chest: scars, pacemaker, medication patches
Chief Complaint: Altered Mental Status

• Some causes manifest quickly, others over days
• Medication reactions are a frequent issue.
• Determine LOC and orientation to person, place, and time.
• Check motor and sensory response.
• Get an ECG and blood sugar reading.

Chief Complaint: Abdominal Pain

• More likely to be hospitalized
• Potential causes change with age.
• Overall pain response is decreased.
• Patient history is key.
• Look for additional signs.
**Chief Complaint: Dizziness or Weakness**

- Factors: balance, injury, oxygen, and energy
- History will help clarify the complaint.
- Check ECG, orthostatic changes, blood sugar
- Check for signs of stroke.
- Assess for signs of head trauma.

**Chief Complaint: Fever**

- Normal response to infection
- Suspect serious infection when accompanied by changed LOC.
- Look for immediate life threats.
- Fever means illness until proven otherwise.
Chief Complaint: Trauma

• Exam follows the ABCs.
• Look for potential medical causes.
• Past history may change the needs of the patient.
• Find the patient’s baseline status.
• Fractures are serious injuries.

Chief Complaint: Pain

• Unpleasant sensory or emotional experience
• Use open-ended questions to evaluate.
• Pain scale can be helpful.
• Interpret vital sign changes as medical issues.
• Older patients may hesitate to complain of pain.
Chief Complaint: Falls

- Generally result from contributing factors
- Look for medical reason for fall.
- Assess for injury and life threats.
- ECG, blood glucose, pulse oximetry

Chief Complaint: Nausea, Vomiting, and Diarrhea

- Can originate in or out of GI tract
- Check for changes in diet or medications.
- Look for signs of dehydration or electrolyte abnormalities.
- Assess for GI bleeding.
BARIATRICS

The problem...

• Obesity rate is increasing in the U.S.
  – More patients will be obese
  – More crew members required for obese patients
  – More/specialized equipment for obese patients
    • Stretchers
    • Ramps/winches
    • Ambulances
    • wheelchairs
What do we do?

- Don’t ignore the issue...plan for it!
  - Protocols should address bariatric patients
- Request lift assistance! Don’t hurt your back!
- Agencies may have a special response unit

Articles

STROKE ASSESSMENT

Stroke: Classification Scales

• Stroke screens and scales
  – Cincinnati Prehospital Stroke Scale (only recognized one in Georgia for prehospital)
  – NIH Stroke Scale (NIHSS)
  – Hunt and Hess Scale (for SAH)

• Fibrinolytic checklist
Stroke: Classification Scales: Cincinnati Prehospital

Facial Droop (have patient show teeth or smile):
- Normal—both sides of face move equally
- Abnormal—one side of face does not move as well as the other side

Arm Drift (patient closes eyes and holds both arms straight out for 10 seconds—see Table 9):
- Normal—both arms move the same or both arms do not move at all (other findings, such as pronator drift, may be helpful)
- Abnormal—one arm does not move or one arm drifts down compared with the other

Abnormal Speech (have the patient say “you can’t teach an old dog new tricks”):
- Normal—patient uses correct words with no slurring
- Abnormal—patient slurs words, uses the wrong words, or is unable to speak

Interpretation: If any 1 of these 3 signs is abnormal, the probability of a stroke is 72%.

Stroke: Classification Scales: Cincinnati Prehospital

- Cincinnati Prehospital Stroke Scale (CPSS)
  - Facial droop
    - Show teeth or smile
  - Arm drift
    - Close eyes, arms straight with palms up
  - Abnormal speech
    - “you can’t teach an old dog new tricks”

- 1 finding = 72% probability
- 3 findings = >85%
Fibrinolytic checklist

• Your service may have Fibrinolytic Checklists that will include multiple questions about history and assessment findings
  – Be sure to fill this out as accurately as possible

• Some History questions/Assessments:
  – Brain hemorrhage
  – Other bleeding problems
  – Recent procedures/surgeries
  – Recent MI/Stroke
  – BP in both arms

THE END!