Taking Care of Your 80%:  
Who Can Stay and  
Who Can Go?  

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Objectives

• To review several trauma scenarios presenting to urgent care or community ED settings
• To discuss the priorities in caring for these injured children
• To discuss which scenarios required immediate transfer to a trauma center and which can be evaluated and managed in the urgent care or community ED setting
Case 1

14 year old boy is brought in by his mother after he “wrecked” on his skateboard 4 hours earlier. He complains of abdominal pain.
What are you thinking about?
Triage Information

• VS: T37.1, HR 85, RR 16, BP 115/72, pox 100%, 55kg
Physical Exam

• General: Alert, talkative, no acute distress
• HEENT: unremarkable
• Neck: full ROM, no tenderness
• CV: RRR, no murmur, good pulses
• Resp: CTAB
• Abd: soft, nondistended, mildly tender LUQ and epigastric area, no rebound, no guarding
• Skin: no bruising, no abrasions
• Neuro: GCS 15
What type of evaluation does he need?

Does he need to be transferred?
What If...
Triage Information

- VS: T 37.1, HR 145, RR 20, BP 75/38, pox 100%, 55kg
Physical Exam

- Gen: Uncomfortable, pale, diaphoretic
- HEENT: unremarkable
- Neck: full ROM, no tenderness
- CV: tachycardic, no murmur, decreased radial pulses
- Resp: CTAB
- Abd: firm, exquisitely tender LUQ, involuntary guarding, positive rebound
- Skin: large bruise over upper abdomen on left
- Neuro: GCS 15
Now What?
Priorities

• Arrange for immediate transfer
• Place IV
• 1 liter NS bolus infused rapidly, repeat if patient is still tachycardic or hypotensive
• Can obtain baseline labs
• Do not delay transfer for labs or imaging
Ultimate Diagnosis:

Grade 4 splenic laceration
Case 2

3 year old fell off tricycle and hit head on driveway. No history of LOC. Mom brings in to be “checked out”
What are you thinking about?
Triage Information

• VS: T 36.8, HR 110, RR 22, BP 90/54, pox 100%, wt 18kg
Physical Exam

• General: Alert, running around room, playing with garbage can

• HEENT: 3cm contusion left forehead, no laceration, PERRL, bilateral TM clear, nares clear, MMM, o/p clear, teeth intact

• Neck: full ROM, no tenderness

• CV: RRR, no murmur, good pulses

• Resp: CTAB

• Abd: soft, nontender, nondistended

• Skin: abrasion left forearm, contusion on forehead

• Neuro: GCS 15, no focal deficits
What type of evaluation does he need?

Does he need to be transferred?
What If...
Triage Information

- VS: T36.8, HR 130, RR 22, BP 88/52, pox 100%, wt 18kg
Physical Exam

- General: Quiet in mom’s arms, eyes closed
- HEENT: 3cm contusion left temporal/parietal area, boggy to palpation, PERRL, bilateral TM clear, nares clear, MMM, o/p clear, teeth intact
- Neck: unable to assess
- CV: RRR, no murmur, good pulses
- Resp: CTAB
- Abd: soft, nontender, nondistended
- Skin: abrasion left shoulder, left forearm
- Neuro: GCS 12 (eye opening 3, verbal, 4, motor 5), no obvious focal deficits
Now What?
Priorities

• Arrange for immediate transfer
• Immobilize cervical spine
• Place IV
• Can obtain baseline labs
• Ultimately needs head CT but do not delay transfer for CT
Ultimate Diagnosis:
Parietal skull fracture with small intraparenchymal hemorrhage
Case 3

9 mo brought in fussy, decreased po intact, mild abdominal pain, emesis x 2 in the past 2 days, mild cough
What are you thinking about?
Triage Information

• VS: T 38.4, HR 155, RR 30, BP 85/55, pox 96%, wt 9kg
Physical Exam

• Gen: Alert, fussy, consoles with mom, congested

• HEENT: AFOSF, congested, bilateral TM dull, no pus, MMM, o/p clear

• Neck: supple

• CV: RRR, no murmur, good pulses,

• Chest: Coarse breath sounds, no distress

• Abd: soft, mildly tender epigastric area, no rebound, no guarding

• Skin: no rashes

• Neuro: alert, no focal deficits
You obtain a chest x-ray...
What type of evaluation does he need?

Does he need to be transferred?
What if...
Triage Information

- VS: T 37.8, HR 155, RR 30, BP 85/55, pox 96%, wt 9kg
Physical Exam

- **Gen:** Alert, fussy, consoles with mom, congested
- **HEENT:** AFOSF, congested, bilateral TM dull, no pus, MMM, o/p clear
- **Neck:** supple
- **CV:** RRR, no murmur, good pulses,
- **Chest:** Coarse breath sounds, no distress
- **Abd:** soft, mildly tender epigastric area, no rebound, no guarding
- **Skin:** no rashes
- **Neuro:** alert, no focal deficits
You obtain a chest x-ray...
Now What?
Priorities

- Arrange for immediate transfer
- Contact 696-KIDS
- Infant will need further imaging...do not delay transfer to obtain these

- What if mom tries to leave with infant?
Ultimate Diagnosis:
Child Abuse
Case 4

15 year old comes into triage in a wheelchair stating “I’ve been shot”
Triage Information

- VS: T36.5, HR 155, RR 20, BP 93/78, pox 100%, 55kg
Physical Exam

• Gen: alert but uncomfortable, pale, diaphoretic
• Neck: supple
• CV: Tachycardic, no murmur
• Chest: CTAB
• Abd: Benign
• Extremities: Entrance wound, lateral upper right thigh with gunpowder residue, exit wound medial middle thigh. Pulsatile bleeding from exit wound site. Diminished pulses right lower extremity. Full ROM foot
Now What?
Priorities

• Hold pressure over exit wound and right inguinal area
• Arrange for immediate transfer
• Place 2 large bore IVs
• Bolus in each IV, on pressure bag if available
Ultimate Diagnosis:
Transection of femoral artery and vein
Case 5

8 year old backseat passenger MVC

Cleared by EMS at the scene

Mom being evaluated in ED

Increasing abdominal pain while waiting with mom

Registered to be “checked out”
What are you thinking about?
Triage Information

- VS: T 36.2, HR 110, RR 22, BP 98/58, pox 100%, weight 30kg
Physical Exam

• General: alert, mildly uncomfortable, nontoxic

• HEENT: unremarkable

• Neck: supple, nontender, full ROM

• CV: RRR, no murmur

• Chest: Lungs CTAB

• Abd: Soft, mild distension, mild diffuse tenderness, no rebound, mild voluntary guarding

• Extremities: full ROM, nontender

• Neuro: alert, GCS 15
What type of evaluation does he need?
Does he need to be transferred?
What if...
Triage Information

- VS: T 36.2, HR 150, RR 22, BP 85/55, pox 100%, weight 30kg
Physical Exam

• General: alert, mildly uncomfortable, nontoxic
• HEENT: unremarkable
• Neck: supple, nontender, full ROM
• CV: RRR, no murmur
• Chest: Lungs CTAB
• Abd: Soft, mild distension, mild diffuse tenderness, no rebound, mild voluntary guarding, bruising across lower abdomen
• Extremities: full ROM, nontender
• Neuro: alert, GCS 15
Abdominal Exam

Figure 1. Lap Belt Ecchymosis

Image courtesy of Dr. Antonio Muñiz.
Now What?
Priorities

- Arrange for immediate transfer
- Immobilize spine
- Place IV
- 20cc/kg NS bolus, repeat if HR and BP don’t improve
- Can obtain baseline labs
- Ultimately needs head CT but do not delay transfer for CT
Ultimate Diagnosis:
Small bowel perforation
Case 6

11 year old boy
Doing jumps on a bike ramp
Flips over handlebars
Lands on pavement
No LOC
What are you thinking about?
Triage Information

• T 37, HR 78, RR 16, BP 110/55, wt 45kg
Physical Exam

• Gen: alert
• Neck: supple, full ROM, no midline tenderness
• CV: RRR, no murmur
• Chest: CTAB
• Abd: Soft, nontender, nondistended
• Extremities: Full ROM, no bony tenderness
• Skin: abrasions over knees and elbows, 2 cm laceration right shin, no active bleeding
What type of evaluation does he need?

Does he need to be transferred?
What if...
Triage Information

- T 37, HR 110, RR 20, BP 88/60, wt 45kg
Physical Exam

• Gen: alert

• Neck: supple, full ROM, no midline tenderness

• CV: tachycardic, no murmur, strong peripheral pulses

• Chest: CTAB

• Abd: Soft, tender epigastric region, mildly distended, involuntary guarding, no rebound

• Extremities: Full ROM, no bony tenderness

• Skin: abrasions over knees and elbows, 2 cm laceration right shin, no active bleeding
Now What?
Priorities

• Arrange for immediate transfer

• Place IV

• 1 liter NS bolus infused rapidly, repeat if patient is still tachycardic or hypotensive

• Can obtain baseline labs

• Will ultimately need abdominal CT

• Do not delay transfer for labs or imaging
Ultimate Diagnosis:
Duodenal hematoma
Case 7

15 year old boy
Doing pull ups on a bar
Bar brakes and lands on neck
What are you thinking about?
Triage Information

- T 36.8, HR 70, RR 16, BP 120/60, wt 65kg
Physical Exam

• Gen: Alert, talkative
• HEENT: unremarkable
• Neck: Mild tenderness over C6-C7, no stepoffs
• CV: RRR, no murmur
• Lungs: CTAB
• Abd: soft, NT, ND
• Extremities: Full ROM
• Neuro: GCS 15, symmetrical strength and sensation, 2+/= reflexes throughout
What type of evaluation does he need?

Does he need to be transferred?
What if...
Triage Information

- T 36.8, HR 70, RR 16, BP 120/60, wt 65kg
Physical Exam

- Gen: awake, alert
- Neck: tender C6-C7
- Chest: RRR, no murmur
- Lungs: CTAB
- Abd: soft, nontender, nondistended
- GU: priapism noted
- Neuro: no sensation below chest, weak sensation in arms, able to mildly flex arms, no movement in legs, no rectal tone
Now What?
Priorities

• Arrange for immediate transfer
• Immobilize CTLS spine
• Place IV
• Do not delay transfer for imaging
• +/- IV steroids (can discuss with accepting trauma surgeon)
Ultimate Diagnosis:

C6 fracture with severe encroachment upon central canal and cord flattening
Case 8

13 year old female
MVC – head on collision
Mother and brother dead at scene
Physical Exam

- Moaning
- Not maintaining airway
- Pupils sluggish
- Abdomen distended with seatbelt sign
- Multiple lacerations right hip
- Bruising to all extremities
Priorities

- Establish airway
- Immobilize spine
- Obtain vascular access
- Fluid resuscitate
- Arrange for immediate transfer
What Really Happened

• Prior to arrival at Rainbow:
  – Intubated
  – 18 gauge IV right hand
  – Triple lumen right femoral vein
  – 6 units PRBC
  – 3 units FFP
  – Foley placed
Ultimate Diagnosis:

- Mesenteric lacerations
- Jejunal perforation
- Large intestine trauma
- Comminuted open right iliac wing fracture
- Vertebral fractures
- Rib fracture
- Traumatic brain injury
- Renal laceration
- Hepatic laceration
Questions?
Thank you!