Scenario Guidebook

Outreach Pediatric Simulation

NEW HAMPSHIRE EMS FOR CHILDREN
Dartmouth Hitchcock Medical Center
One Medical Center Drive
Lebanon, NH 03756
Dartmouth Health

December 16, 2022

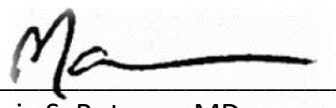
Dear EMS PECCs, educators and providers,

For three decades, the New Hampshire EMS for Children (EMSC) program has collaborated with hospitals, pre-hospital emergency services, the NH Bureau of EMS, Granite State Health Care Coalition, families, and numerous community organizations throughout New Hampshire with the goal of improving pediatric emergency care.

We are excited to provide this document as part of our Rural Expansion project, designed by and for our rural EMS agencies across the state. The goal of this project and an ongoing effort of EMSC is to approach equity across our state so that all providers have access to the tools, training and resources needed to provide high quality care for pediatric patients and their families no matter where they seek emergency care within the Granite State. As is common practice of EMSC, this document is free and available to any agency, department or organization looking to improve their pediatric readiness through scenario training. If you would like to request a copy please email Anna.K.Sessa@hitchcock.org

Thank you to the Kansas EMS for Children program for creating this content and sharing it. Finally, to our EMS providers: every day you make a commitment to serve our pediatric community and we appreciate you for that.

Stay safe and well,



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This project is/was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number H33MC32395 Emergency Medical Services for Children. This information or content and conclusions should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

MEDICAL SCENARIOS

ACCIDENTAL OVERDOSE

Goals/Objectives:
- Scene safety
- Assess and secure airway
- Recognition and treatment for unresponsive state
- Recognition of transport necessity

Dispatch Information:
A call was received from a frantic adult stating that her 2-year-old granddaughter was unresponsive on the bedroom floor. Patient is breathing, but not currently alert.

Chief Complaint:
Unresponsive

Additional Resources Requested:
Police and Fire Departments, ALS

Scene Description:
- Arrive at address and notice an older gentleman waving at you from the porch
- Home is clean, tidy and no animals are noted to be present. You are escorted to a basement bedroom
- The patient is lying on the carpeted floor with an older woman at her side. Woman identifies self as patient's grandma
- Patient was reportedly napping

Initial Impression: Patient is dressed appropriately for time of year. You notice a pill bottle under the bed.

Vital Sign – Set 1
AVPU: Unresponsive
B/P: 80/palpation
HR: 70, regular
Resp: 10, labored
O_2 Sat: 90% (room air)
Pain:
GCS: 3 (1,1,1)
BGL:

Vital Sign – (prior to Naloxone)
AVPU: Unresponsive
B/P: 82/64
HR: 78, regular
Resp: 10, labored
O_2 Sat: 94% (O_2 applied)
Pain:
GCS: 3 (1,1,1)
BGL: 84 mg/dl

Vital Sign – (after Naloxone)
AVPU: Alert, Confused
B/P: 100/60
HR: 110, regular
Resp: 18, nonlabored
O_2 Sat: 98%
Pain: 0
GCS: 14 (4,4,6)
BGL:

Suggested Treatment:
O_2, Suction if necessary, Monitor, IV/IO, Administration of Naloxone

Physical Exam

HEENT:
Head: No trauma noted
Eyes: Sluggish and pinpoint
Ears: Unremarkable
Nose: Unremarkable
Oral Cavity: Lips noted to have white substance on them. Half of a white pill is noted in the patient's mouth

Chest:
Equal chest rise and fall noted
Clear equal in all lung fields

Back:
No external trauma noted

Abdomen/Pelvis:
Unremarkable

Extremity:
No external trauma noted

Other:
Skin: Cool, pale and dry

EKG: Sinus Rhythm

After Naloxone administration:
- Patient can maintain own airway
- Respirations return within normal limits
- Patient remain tired, Pupils now PERL

HPI: Patient has been putting everything in their mouth lately

S/S: Unresponsive

Allergies: NKDA

Medications: Daily Vitamin

PmHx: RSV at 1 year of age

Last Meal: Pizza and chips for lunch

Events Prior: Napping in bedroom. Was checked on an hour previous and was asleep in the bed

Current on Immunizations? Yes

Patient Weight: 12kg

Notes:
Grandmother advises that she was caring for a friend last week that had knee surgery. Her friend stayed in this room and was taking Lortab for post op pain relief

Pill bottle found is for Lortab 7.5mL

Transport Consideration:
Secure patient properly on cot
Transport in seated position secondary to possible vomiting

ACCIDENTAL OVERDOSE

Additional Things to Consider about the Scene:

- Possibly have grandma call friend and inquire about number of pills missing
- Family centered care

Additional Things to Consider during Treatment/Transport:

- If dealing with an unknown medication, contact the Poison Control Center
- When administering Naxolone, it is a slow push and titrated to desired effect
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility
- Contact patient's legal guardian, if possible

Additional Educational Resources to Consider:

- Poison Control Center
  - https://www.poison.org
- Northern New England Poison Control Center
  - https://www.nnepc.org/
  - Call 1-800-222-1222
  - Text POISON to 85511

Things to consider based on your EMS protocols, procedures and/or policies:

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SEIZURE: FEBRILE

Goals/Objectives:
- Assess and secure airway
- Recognition of risk and/or presence of secondary trauma
- Recognition of transport necessity

Dispatch Information:
Responding to a 15-month-old male having a seizure. Patient's father called 911 after he brought child into his room when child would not settle down. Father stated that patient kept thrashing around and then realized he was having a seizure.

Chief Complaint:
Seizure

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- December 21st at 0100
- Outside temperature is 25 degrees F with 1 inch of new snow on top of 2 inches of ice
- Patient's father meets Fire and EMS in living room with child
- Home noted to be clean

Initial Impression: Patient is in pajamas being held by father. Patient is sleepy and whimpers when moved.

Vital Sign – Set 1
AVPU: Alert
B/P: 80/50
HR: 124, regular
Resp: 30, non-labored
O_2 Sat: 94% (room air)
Pain:
GCS: 11 (3, 4, 4)
BGL:

Vital Sign – Set 2
AVPU: Alert
B/P: 96/52
HR: 138, regular
Resp: 28, non-labored
O_2 Sat: 98% (O_2 applied)
Pain:
GCS: 12 (3, 4, 5)
BGL: 107 mg/dl

Vital Sign – Set 3
AVPU: Alert
B/P: 90/70
HR: 120, regular
Resp: 24, non-labored
O_2 Sat: 98% (O_2 applied)
Pain:
GCS: 13 (4, 4, 5)
BGL:

Suggested Treatment:
O_2, Monitor, Airway monitor/control

Physical Exam

HEENT:
Head: Unremarkable
Eyes: Initially, Left – sluggish, Right - quick
Ears: Unremarkable
Nose: Unremarkable
Oral Cavity: Unremarkable
Patient able to clear and control own airway

Chest:
Equal chest rise and fall noted
Lung sounds clear
No external trauma noted

Back:
No trauma noted

Abdomen/Pelvis:
No guarding noted upon quadrant palpation
No trauma noted
Pelvis stable

Extremity:
No trauma noted to legs or arms
PMS x 4 (presumed, since child moves limb away when pain applied)

Other:
Skin: pale, warm
No step off's or tenderness noted to neck

Pupils noted to be PERL 10 minutes into call

HPI: See events prior below

S/S: pale, GCS 11 initially; limp limbs, but will move to pain

Allergies: NKDA

Medications: None

PmHx: Ear infection three weeks ago

Last Meal: Dinner, 7hr ago

Events Prior: Patient's mother is out of town, so father brought son into their room to sleep. Patient awoke his father when he was noted to be moaning

Current on Immunizations? Yes

Patient Weight: 11kg

Notes:
Body Temp: 99.4 F

ECG: Sinus Tachycardia

Father denies noting any recent fevers

Transport Consideration:
Securing patient properly on cot
Guardian ride along

SEIZURE: FEBRILE

Additional Things to Consider about the Scene:

- Will family allow you to view where the seizure activity took place
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Is or was patient taking any medications for his recent ear infection
- Is incontinence noted
- Was a cooling agent and/or activity done by family prior to your arrival
- Oral cavity can have trauma secondary to biting of the tongue
- Weigh the pros and cons of starting an IV on this patient
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- Temperature Measurement in Pediatrics
    - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2819918/

Normal temperature ranges

Measurement method	Normal temperature range
Rectal	36.6°C to 38°C (97.9°F to 100.4°F)
Ear	35.8°C to 38°C (96.4°F to 100.4°F)
Oral	35.5°C to 37.5°C (95.9°F to 99.5°F)
Axillary	34.7°C to 37.3°C (94.5°F to 99.1°F)

Things to consider based on your EMS protocols, procedures and/or policies:

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*Graphic obtained from medguidance

SEIZURE: EPILEPSY

Goals/Objectives:
- Assess and secure airway
- Recognition of risk and/or presence of secondary trauma
- Recognition of transport necessity

Dispatch Information:
Responding to a 4-year-old female having a seizure at school. Patient is a known epileptic, well-controlled on medication. Patient was playing with friends on the playground when the other children alerted the teacher she was having a seizure.

Chief Complaint:
Seizure

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- Spring afternoon at local preschool/daycare, high of 88 degrees
- Two adults carried the patient inside and are currently with her
- You are waved to the door by the school's main office

Initial Impression: Patient is in regular street clothes noted to lying in caregiver's arms. Mouth is open, eyes rolled back in head and breathing is rapid and shallow. Patient is not currently seizing. All seizure activity ended about a minute ago.

Vital Sign – Set 1
AVPU: Painful
B/P: 98/62
HR: 144, regular
Resp: 36, non-labored
O_2 Sat: 90% (room air)
Pain:
GCS: 5 (1, 1, 3)
BGL:

Vital Sign – Set 2
AVPU: Verbal Inappropriate
B/P: 96/52
HR: 138, regular
Resp: 28, non-labored
O_2 Sat: 98% (O_2 applied)
Pain:
GCS: 10 (3, 2, 5)
BGL: 107 mg/dl

Vital Sign – Set 3
AVPU: Alert, Confused
B/P: 90/70
HR: 120, regular
Resp: 24, non-labored
O_2 Sat: 98% (O_2 applied)
Pain:
GCS: 13 (4, 4, 5)
BGL:

Suggested Treatment:
O_2, Monitor, C-spine precautions

Physical Exam

HEENT:
Head: Small "goose egg" spot to R temporal
Eyes: Initially, Right pupil is dilated, non-reactive
Ears: Unremarkable
Nose: Unremarkable
Oral Cavity: Unremarkable
Patient able to clear and control own airway

Chest:
Equal chest rise and fall noted
Lung sounds clear
No external trauma noted

Back:
Small red mark noted to patient's mid-back on the right side

Abdomen/Pelvis:
No guarding noted upon quadrant palpation
No trauma noted
Pelvis stable

Extremity:
No trauma noted to legs or arms
PMS x 4 (presumed, since child moves limb away when pain applied)

Other:
Skin: Pale, warm
No step off's or tenderness noted to neck

Pupils both return to PERL during transport

HPI: See events prior below

S/S: Initially; limp limbs, but will respond to pain

Allergies: NKDA

Medications: Multivitamin, Keppra 120mg BID

PmHx: Seizures, Concussion at 3yo

Last Meal: Snack, 45min ago

Events Prior: Classmates said patient slipped on climbing structure and hit her head on the railing. Teacher witnessed the patient fall onto soft recycled tire material

Current on Immunizations? Yes

Patient Weight: 17kg

Notes:
Body Temp: 97.1

ECG: Sinus Tachycardia

Parents will meet at local hospital. Patient moans and whimpers with any intervention. Muscles are weak, and patient is easily restrained and compliant during treatment

Transport Consideration:
Securing patient properly on cot

SEIZURE: EPILEPSY

Additional Things to Consider about the Scene:

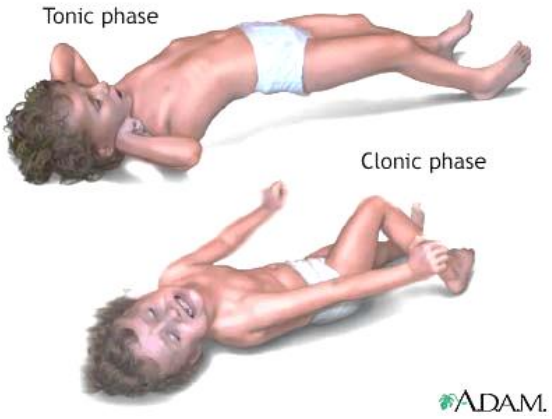
- Have there been any changes to her medications
- How far was the fall from the playground equipment to the ground
- Did patient fall on her head or land on another body part
- How exactly was the patient carried into the school from the playground
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Have there been any changes to her medications
- When was her last lab work completed
- Is incontinence noted
- Oral cavity can have trauma secondary to biting of the tongue
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- Epilepsy Foundation
    - https://www.epilepsy.com/living-epilepsy/parents-and-caregivers/about-kids



Things to consider based on your EMS protocols, procedures and/or policies:

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*Graphic obtained from findmeacure.com

DIABETIC: KETOACIDOSIS

Goals/Objectives:
- Assess and secure airway
- Recognition of risk and/or presence of secondary illness
- Recognition of transport necessity

Dispatch Information:
Responding to a 15-year-old female patient complaining of nausea, vomiting and weakness while attending a summer school activity. Patient is a known diabetic and in the office of the school nurse. Patient's blood glucose monitor is reading "high" on bedside glucometer.

Chief Complaint:
Hyperglycemia

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- Summer July morning, 88 degrees F outside and rising. Bright sunshine, slight breeze
- You proceed/are shown to the school nurse office, where the patient is lying on her right side on an exam table
- Patient is moaning, but opens her eyes and looks at you when you approach

Initial Impression: Patient is wearing shorts and t-shirt lying on exam table of nurse's office.

Vital Sign – Set 1
AVPU: Alert
B/P: 108/68
HR: 112, regular
Resp: 24, nonlabored
O_2 Sat: 98% (room air)
Pain:
GCS: 15 (4, 5, 6)
BGL:

Vital Sign – Set 2
AVPU: Alert
B/P: 106/62
HR: 138, regular
Resp: 28, nonlabored
O_2 Sat: 98% (room air)
Pain: 2
GCS: 15 (4, 5, 6)
BGL: "HIGH" dl/mg

Vital Sign – Set 3
AVPU: Alert
B/P: 109/70
HR: 110, regular
Resp: 24, nonlabored
O_2 Sat: 98% (room air)
Pain:
GCS: 15
BGL:

Suggested Treatment:
O_2, Monitor, Airway Management, Fluids

Physical Exam

HEENT:
Head: Patient states she has a headache
Eyes: PEERL
Ears: Unremarkable
Nose: Unremarkable
Oral Cavity: Dry tongue, membranes
Patient able to clear and control own airway

Chest:
Equal chest rise and fall noted
Lung sounds clear
No external trauma noted

Back:
No trauma noted

Abdomen/Pelvis:
Guarding noted upon quadrant palpation
Patient says her entire abdomen hurts
No trauma noted
Pelvis stable

Extremity:
No trauma noted to legs or arms
PMS x 4

Other:
Skin: Flush, Warm, Dry

Patient complains of blurred vision during transport

HPI: Patient was not feeling well this morning and skipped breakfast. Patient could not focus in class, left for the restroom and vomited. Patient then went to school nurse. Patient does not monitor her diet nor does regular blood testing, but does take her insulin as scheduled

S/S: Feels weak, Headache

Allergies: Amoxicillin, penicillin

Medications: Insulin BID, Multivitamin

PmHx: Type I Diabetes,

Last Meal: Dinner, last night

Events Prior: See above

Current on Immunizations? Yes

Patient Weight: 65kg

Notes:
Body Temp: 100.3

ECG: Sinus Tachycardia

Patient realizes during assessment with appropriate questioning that she drank a lot of water yesterday and has been urinating more often the last two days

Transport Consideration:
Securing patient properly on cot

DIABETIC: KETOACIDOSIS

Additional Things to Consider about the Scene:

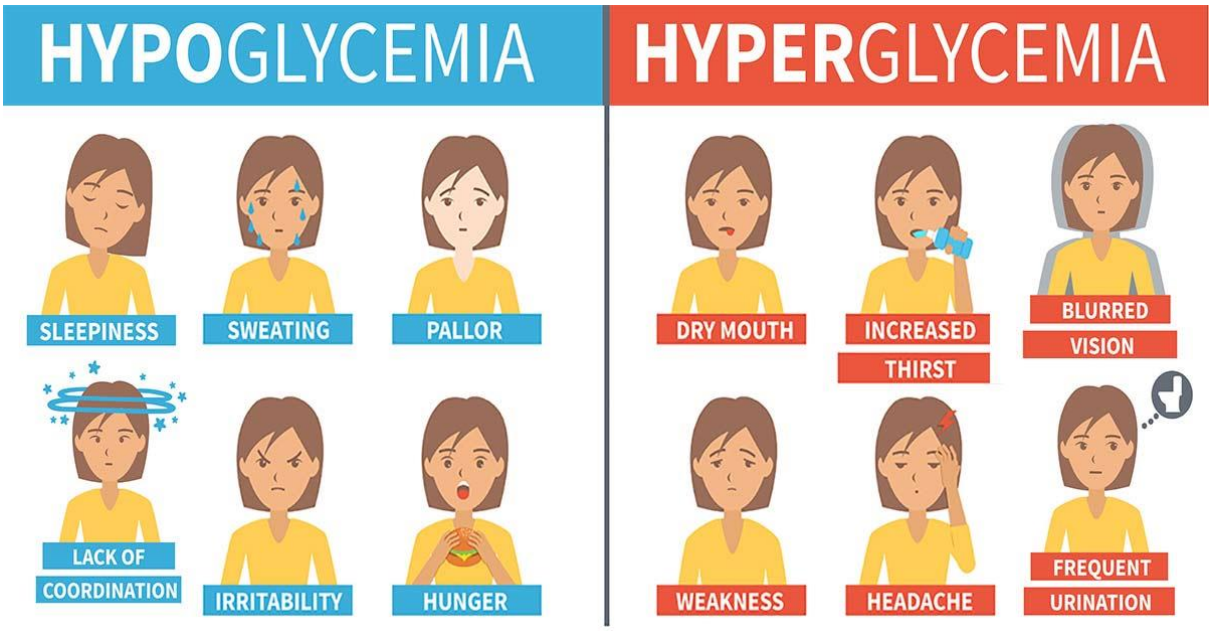
- Know the range limitations for ‘lows’ and ‘highs’ on the monitor you are using
- Is the patient in air conditioning or outside temperatures throughout the day
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Know the range limitations for ‘lows’ and ‘highs’ on the monitor you are using
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- American Diabetes Association
  - www.diabetes.org
- American Academy of Pediatrics: Healthy Children
  - www.healthychildren.org/English/health-issues/conditions/chronic/Pages/Diabetes.aspx



Things to consider based on your EMS protocols, procedures and/or policies:

_Range on service glucometers _____

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*Graphic obtained from Daily Health Post

ABDOMINAL PAIN

Goals/Objectives:
- Assess and secure airway
- Recognition of risk and/or presence of secondary illness or trauma
- Recognition of transport necessity

Dispatch Information:
You are called to the local hotel where the caller states her 14-year-old daughter is experiencing abdominal discomfort. Caller states that have been in the car driving for the last 8 hours. When patient got out of the car, she stated she did not feel well and has not quit crying stating the pain is too much to bear.

Chief Complaint:
Abdominal Pain

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- It is a hot July day with outside temperatures reaching 102 degrees F. Current time is 1930
- Patient is found laying in hotel bed in the fetal position, crying
- There is a small trash can to also be noted in the bed with that patient

Initial Impression: Patient is in obvious pain and refuses to sit up or move upon EMS arrival. Patient is crying but slows to respond appropriately to questioning.

Vital Sign – Set 1
AVPU: Alert
B/P: 122/84
HR: 116, regular
Resp: 22, nonlabored
O2 Sat: 98% (room air)
Pain: 9
GCS: 15 (4, 5, 6)
BGL:

Vital Sign – Set 2
AVPU: Alert
B/P: 126/90
HR: 122, regular
Resp: 22, nonlabored
O2 Sat: 98% (room air)
Pain: 9 (7 with medication)
GCS: 15 (4, 5, 6)
BGL: 84 mg/dl (if assessed)

Vital Sign – Set 3
AVPU: Alert
B/P: 118/78
HR: 112, regular
Resp: 20, nonlabored
O2 Sat: 98% (room air)
Pain: 9 (6 with medication)
GCS: 15 (4, 5, 6)
BGL:

Suggested Treatment:
O_2, Monitor, IV, Fluids, Pain control

Physical Exam

HEENT:
Head: Unremarkable
Eyes: PERL
Ears: Unremarkable
Nose: Unremarkable
Oral Cavity: Unremarkable
Patient able to clear and control own airway

Chest:
Equal chest rise and fall noted
Lung sounds clear
No external trauma noted

Back:
Has some radiating pain to lower back

Abdomen/Pelvis:
Guarding noted upon palpation, radiating pain noted from right lower quadrant
No trauma noted
Pelvis stable

Extremity:
No trauma noted to legs or arms
PMS x 4

Other:
Skin: Pale, warm
No step off's or tenderness noted to neck

Patient had a bowel movement about 1400

HPI: Patient states she wasn't feeling well earlier, but thought she was just tired. About an hour ago she had a sudden onset of lower abdominal pain

S/S: Nausea, Fever, Abdominal pain

Allergies: NKDA

Medications: Birth Control

PmHx: None

Last Meal: Refused lunch

Events Prior: Patient has been asleep in the car most of the day

Current on Immunizations? Yes

Patient Weight: 49kg

Notes:
Body Temp: 101.6 F

ECG: Sinus Tachycardia

Patient denies being sexually active

Patient's menstrual cycle is normal, and she is on day 17

Patient states pain increases when walking

Transport Consideration:
Securing child properly on cot

ABDOMINAL PAIN

Additional Things to Consider about the Scene:

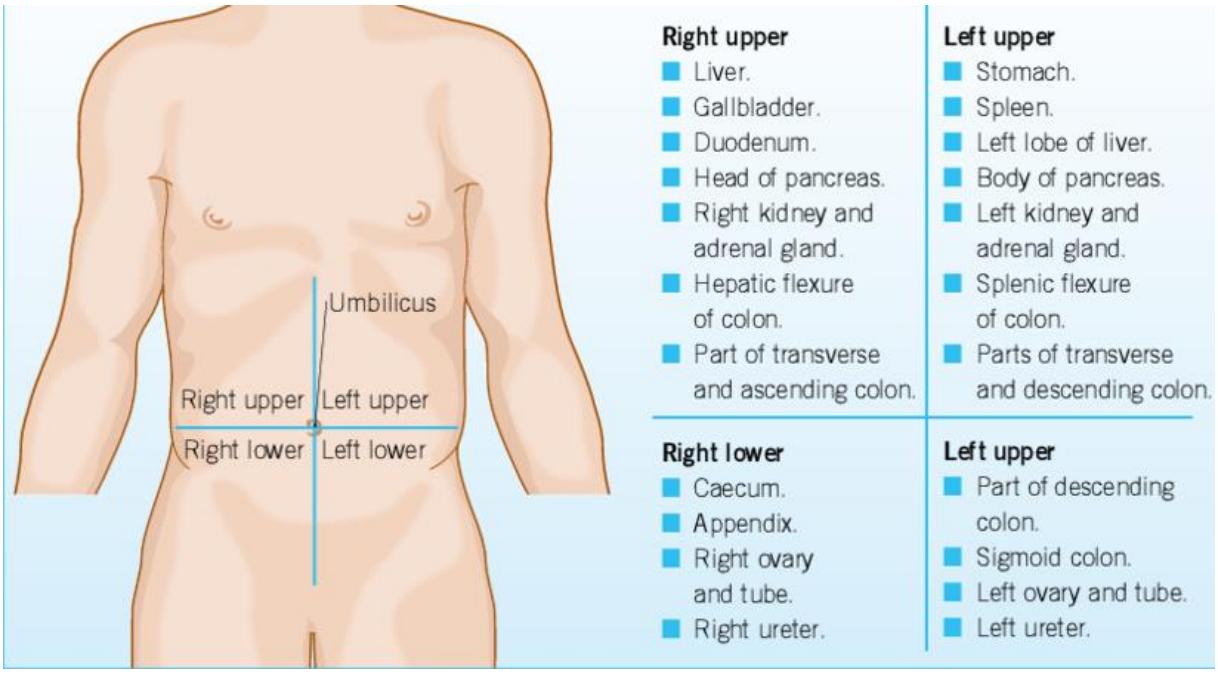
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Modesty of patient during exam
- Asking personal questions without guardian or others hearing answers
- Considerations; ectopic pregnancy, ovarian cyst, menstrual cramps, constipation, appendicitis
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- American Academy of Pediatrics: Healthy Children
    - www.healthychildren.org/English/health-issues/conditions/abdominal/Pages/default.aspx



Things to consider based on your EMS protocols, procedures and/or policies:

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*Graphic obtained from researchgate.net

CARDIAC

Goals/Objectives:
- Assess and secure airway
- Assessment of family history
- Recognition of possible cardiac complication
- Recognition of transport necessity

Dispatch Information:
You are called to the home of a 3-year-old having trouble breathing. Caller states her daughter was outside running around and became very tired and now cannot catch her breath. This is the first nice day outside since they had a colder winter and the patient was excited to play outdoors. Patient also is telling mother her chest hurts.

Chief Complaint:
Difficulty Breathing

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- Warm day in late March. First day above 50 degrees in months. The sun is shining, and it is around 1600
- Patient is found sitting on the back porch in her father's lap. Patient is struggling to breath as you approach her
- Patient looks at you but does not move, smile or speak

Initial Impression: Patient is dressed in shorts and a t-shirt. Patient is visible scared and will not let go of her father.

Vital Sign – Set 1
AVPU: Alert
B/P: 126/70
HR: 132, regular
Resp: 32, labored
O2 Sat: 86% (room air)
Pain:
GCS: 15 (4, 5, 6)
BGL:

Vital Sign – Set 2
AVPU: Alert
B/P: 122/80
HR: 126, regular
Resp: 28, labored
O2 Sat: 84% (room air) 94% O_2
Pain: 4
GCS: 15 (4, 5, 6)
BGL: 92 mg/dl
Patient begins to calm down with oxygen administration

Vital Sign – Set 3
AVPU: Alert
B/P: 118/76
HR: 118, regular
Resp: 24, slightly labored
O2 Sat: 95% (O2)
Pain: 3
GCS: 15 (4, 5, 6)
BGL:

Suggested Treatment:
O_2, Monitor, Airway Management

Physical Exam

HEENT:
Head: Bobbing while trying to catch breath
Eyes: PERL
Ears: Unremarkable
Nose: Nasal flaring noted
Oral Cavity: Dry, pursed lips, cyanosis noted
Patient is trying hard to control her breathing

Chest:
Equal chest rise and fall noted, shallow
Lung sounds diminished in all lobes
No external trauma noted
Patient states her chest is 'tight'

Back:
Unremarkable

Abdomen/Pelvis:
No guarding noted upon quadrant palpation
No trauma noted
Pelvis stable

Extremity:
No trauma noted to legs or arms
PMS x 4

Other:
Skin: Pale, Cool, Moist
No step off's or tenderness noted to neck

Patient releases from her dad and feels better sitting straight up. She can speak in 4-5-word sentences with oxygen administration

HPI: Patient has not been ill but after her 3-year-old check-up, the pediatrician thought it necessary to involve a cardiologist to evaluate a persistent heart murmur and anxiety

S/S: Cyanosis, Difficulty breathing, Dizziness, Chest pain

Allergies: NKDA

Medications: Aspirin, Ativan

PmHx: Currently being evaluated for cardiac condition, anxiety

Last Meal: Lunch at 1130

Events Prior: Playing outside

Current on Immunizations? Yes

Patient Weight: 12kg

Notes:
Body Temp: 98.2 F

ECG: Sinus Tachycardia

Mother states that last week they say a specialist at the Children's Hospital to discuss possible cardiac conditions

Patient has these episodes and gets very anxious

Transport Consideration:
Securing child properly on cot

CARDIAC

Additional Things to Consider about the Scene:

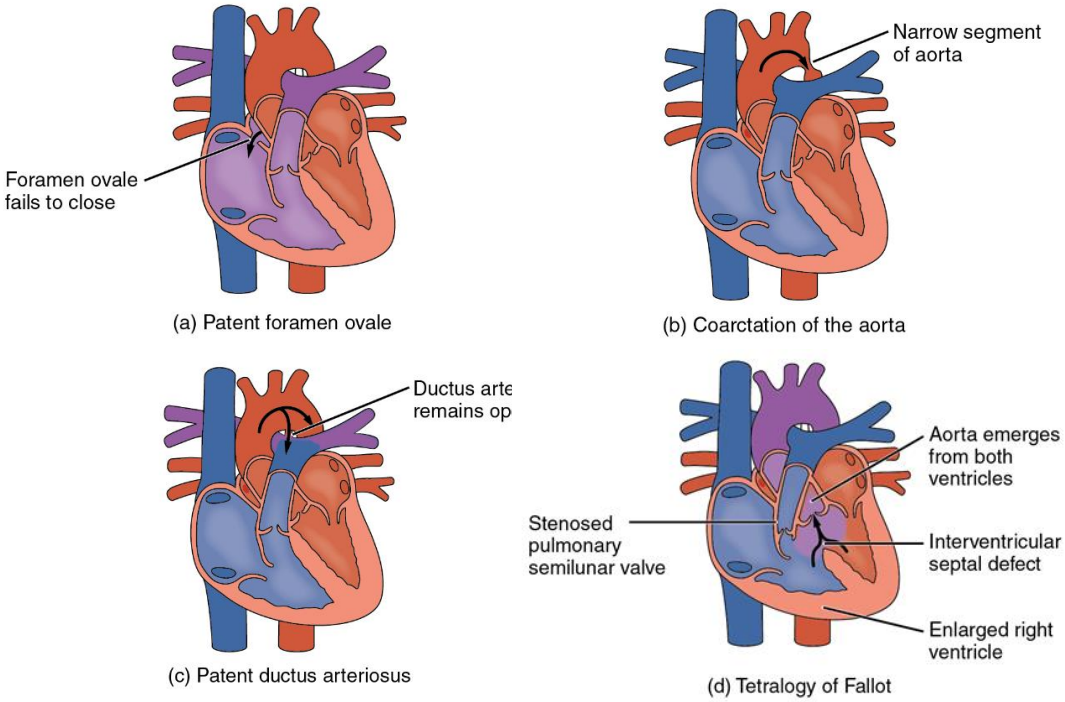
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Contacting specialty hospital/physician for treatment guidelines
- Any documentation from the physician about current condition
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- American Academy of Pediatrics: Healthy Children
  - www.healthychildren.org/English/health-issues/conditions/heart/Pages/default.aspx
- American Heart Association: Cardiovascular Conditions of Childhood
  - www.heart.org/HEARTORG/Conditions/More/CardiovascularConditionsofChildhood/Cardiovascular-Conditions-of-Childhood_UCM_314135_SubHomePage.jsp



Things to consider based on your EMS protocols, procedures and/or policies:

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*Graphics obtained from opentextbc.ca

SEPSIS

Goals/Objectives:
- Assess and secure airway
- Recognition of risk for sepsis secondary to recent infection
- Recognition of transport necessity

Dispatch Information:
You are called to a home where the caller is stating his 2-year-old daughter is lethargic and not acting like normal. Patient came home from daycare yesterday and went straight to bed without dinner. His wife had to wake the child this morning after she did not come downstairs for breakfast.

Chief Complaint:
Lethargic

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- It is a cool fall Saturday morning at 0900
- Patient is found in her mother's lap on the couch. Patient does not move or look up as you enter the home
- Home is tidy and both parents are present. Mother hands you a prescription antibiotic bottle that is empty
- Patient was being treated for a urinary tract infection secondary to bubble baths and potty training

Initial Impression: Patient is wearing pajamas and does not follow movement of individuals.

Vital Sign – Set 1
AVPU: Alert
B/P: 80/60
HR: 132, regular
Resp: 28, labored
O_2 Sat: 96% (room air)
Pain: Constantly moaning
GCS: 15 (3, 4, 5)
BGL:

Vital Sign – Set 2
AVPU: Alert
B/P: 84/58
HR: 130, regular
Resp: 30, labored
O_2 Sat: 97% (O_2) 94% (room air)
Pain: Screams when touched
GCS: 15 (4, 5, 6)
BGL: 70 mg/dl

Vital Sign – Set 3
AVPU: Alert
B/P: 76/52
HR: 132, regular
Resp: 28, labored
O_2 Sat: 97% (O_2) 94% (room air)
Pain:
GCS: 15 (4, 5, 6)
BGL:

Physical Exam

HEENT:
Head: Unremarkable
Eyes: PERL, keeps eyes closed during exam
Ears: Unremarkable
Nose: Unremarkable
Oral Cavity: Dry
Patient able to clear and control own airway

Chest:
Equal chest rise and fall noted, shallow
Lung sounds clear
No external trauma noted

Back:
Unremarkable

Abdomen/Pelvis:
Guarding in all quadrants upon palpation
No trauma noted
Pelvis stable

Extremity:
No trauma noted to legs or arms
PMS x 4

Other:
Skin: Pale and clammy
No step off's or tenderness noted to neck

Patient has had a decrease in urinating and no bowel movement for 2 days

HPI: Patient cannot seem to shake any illnesses since starting daycare 3 weeks ago

S/S: Decreased appetite, Lethargy, Fatigue, Nausea, Increased pain

Allergies: NKDA

Medications: Tylenol

PmHx: Recent UTI

Last Meal: Lunch yesterday

Events Prior: Patient has been sleeping constantly and unable to keep any food down

Current on Immunizations? Yes

Patient Weight: 10kg

Notes:
Body Temp: 103.5 F

ECG: Sinus Tachycardia

Mother states that physician advised no more bubble baths and that patient would need help while cleaning after using the restroom

Suggested Treatment:
O_2, Monitor, IV, Fluids

Transport Consideration:
Securing child properly on cot
Guardian riding

SEPSIS

Additional Things to Consider about the Scene:

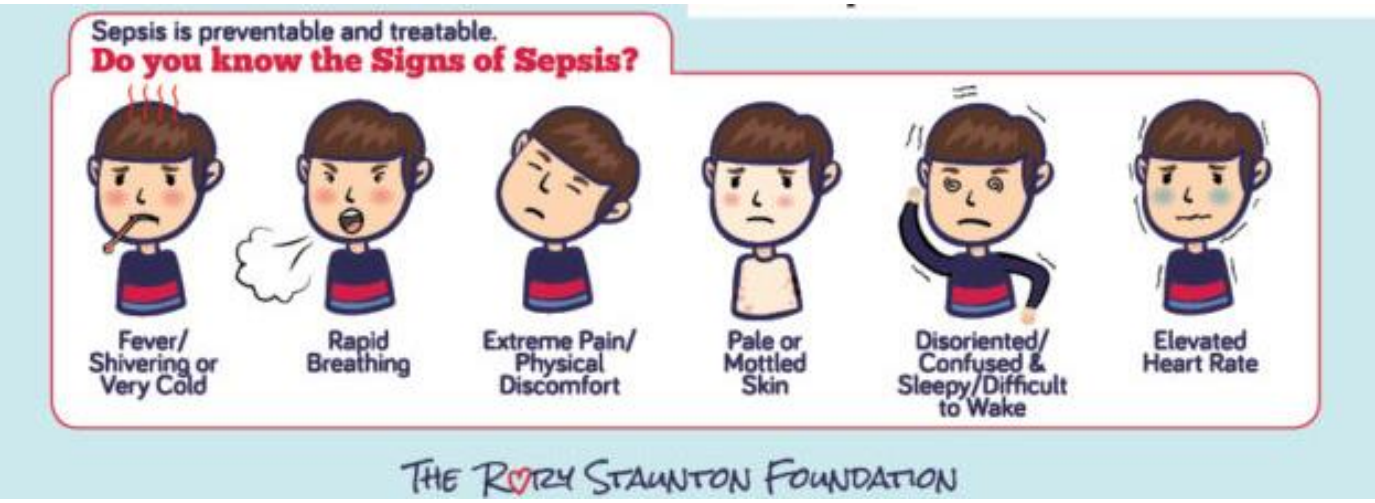
- Family centered care

Additional Things to Consider during Treatment/Transport:

- What other infections or illnesses has the patient experienced recently
- What over-the-counter medication(s) have been used, if any
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- American Academy of Pediatrics: Healthy Children
  - www.healthychildren.org/English/health-issues/conditions/infections/Pages/Sepsis-in-Infants-Children.aspx
- The Rory Staunton Foundation: For Sepsis Prevention
  - rorystauntonfoundationforsepsis.org/



Things to consider based on your EMS protocols, procedures and/or policies:

__Fluids_____

__Consider calling a Sepsis Alert to hospital_____

_____

_____

*Graphic obtained from The Rory Staunton Foundation

SEPSIS: PICC LINE INFECTION

Goals/Objectives:
- Recognition of risk and/or presence of sepsis
- Recognition of sepsis treatment/pediatric fluid resuscitation guidelines
- Recognition of transport necessity

Dispatch Information:
You are responding to a 15-year-old female who is unresponsive at home. Patient has been sick for a few days per mother, and suddenly became unresponsive after being confused for the last hour.

Chief Complaint:
Unresponsive

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- Fall evening, 64 degrees F outside. No rain/storms around, slight chill to the air. Pleasant
- Female shows you inside and to a bedroom. Two other children are being ushered from the room by another adult
- Patient's mother is holding her and rocking her slowly while crying and patting her face gently
- Slight grimace of patient's face noted with patting.

Initial Impression: Patient is in pajamas and limp in mother's arms.

Vital Sign – Set 1
AVPU: Painful
B/P: 78/40
HR: 134, regular
Resp: 30, shallow
O_2 Sat: 91% (room air)
Pain:
GCS: 8 (2, 2, 4)
BGL:

Vital Sign – Set 2
AVPU: Painful
B/P: 76/52
HR: 132, regular
Resp: 28, shallow
O_2 Sat: 98% (O_2) (91% No O_2)
Pain:
GCS: 8 (2, 2, 4)
BGL: 198 dl/mg

Vital Sign – Set 3
AVPU: Painful (V if fluids given)
B/P: 80/60, if fluids (otherwise, hypotensive)
HR: 120, regular
Resp: 24, non-labored
O_2 Sat: 98% (O_2 applied)
GCS: With fluids: 10 (3, 3, 4), otherwise still 8 (2, 2, 4)

Suggested Treatment:
O_2, Monitor, Fluids, Airway monitor/control

Physical Exam

HEENT:
Head: Unremarkable
Eyes: PEERL, will resist light shone in eyes with weak movement of head/neck
Ears: Unremarkable
Nose: Unremarkable
Oral Cavity: Note to be slightly pale, moist

Chest:
Equal chest rise and fall noted, shallow
Lung sounds clear in uppers, diminished in lowers
No external trauma noted

Back:
Unremarkable

Abdomen/Pelvis:
No guarding noted upon quadrant palpation
No trauma noted
Pelvis stable

Extremity:
PMS x 4 (presumed, since child moves limb away when pain applied)
Left arm noted to look red around site of PICC Line; if colored bandage moved, will see crusty yellow at site of entrance to body. Mother states it is 'not as long as normal'

Other:
Skin: Pale, Hot, Flushed

HPI: Patient is four days post-chemo and has been ill. Patient has been awake some of the day but returned to be after becoming tired and confused. Mother came to get her dinner and found her unresponsive.

S/S: Pale, Flaccid, No movement

Allergies: NKDA

Medications: Chemo medications, Steroids, Probiotics, Multivitamins

PmHx: Leukemia for last two years

Last Meal: Lunch, 7hr ago

Current on Immunizations? No

Patient Weight: 45 kg

Notes:
Body Temp: 104.5

ECG: Sinus Tachycardia

Patient will open eyes to sound once fluids are started and 250-400mL of fluids are given. (20mL/kg bolus)

Nearest children's hospital is where the patient is treated for her cancer

Transport Consideration:
Securing patient properly on cot
Guardian riding along

SEPSIS: PICC LINE INFECTION

Additional Things to Consider about the Scene:

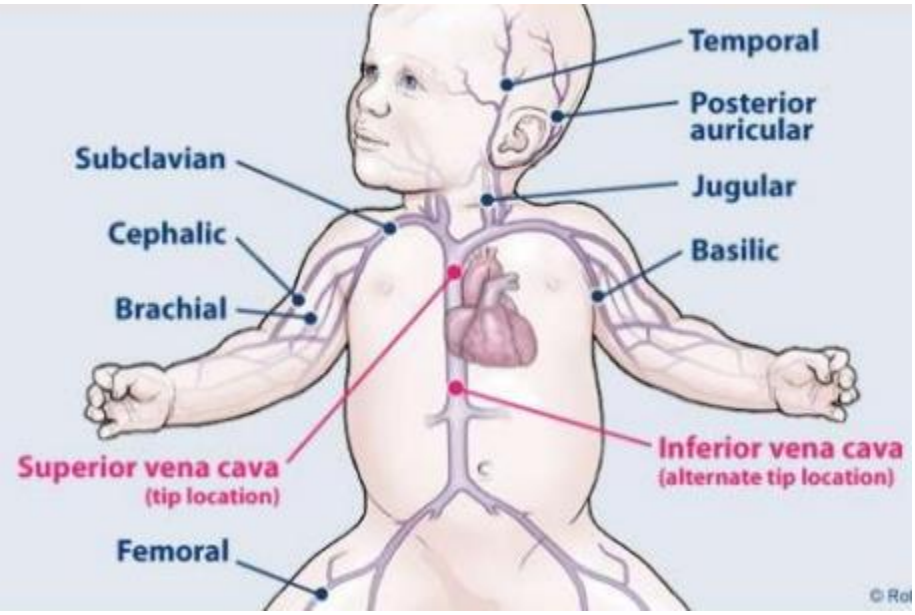
- Cleaning solutions or maintenance schedule for the PICC line
- Additional health care needs or equipment to take during transport
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Review the patient care plan from patient's specialist on treatment modalities
- Directly contact the patient's specialist for best desired treatment
- Alternative route for medication/fluid administration
- Stabilize PICC line, however do not use, reinsert or pull completely out
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility; specialty hospital in resources allow

Additional Educational Resources to Consider:

Pediatric PICC Line Sites



Things to consider based on your EMS protocols, procedures and/or policies:

____Fluids_____

____Consider calling Sepsis Alert to hospital_____

_____

_____

*Graphic obtained from slideshare.net

SUDDEN INFANT DEATH SYNDROME

Goals/Objectives:
- Scene preservation
- Acknowledgement of situation
- Communication with guardians - verbiage

Dispatch Information:
You are dispatched to a home for an unresponsive infant. Caller states her 5-month-old daughter had been put to sleep in her own crib and was found unresponsive. Mother is hysterical on the phone and unable to follow dispatch instructions for CPR. Mother does state the infant is cold to the touch.

Chief Complaint:
Unresponsive Infant

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- It is a cool fall morning around 0600
- You arrive on scene and PD advises the scene is safe for you to enter
- Patient is found in a crib on her back next to the mother's bed. There are no blankets or additional items in the crib
- Patient is wearing a onesie

Initial Impression: Patient is cold to the touch with rigor mortis present in jaw and upper extremities. Code black.

Vital Sign – Set 1
AVPU: Unresponsive
B/P:
HR: 0
Resp: 0
O_2 Sat:
Pain:
GCS: 3 (1,1,1)
BGL:

Vital Sign – Set 2
AVPU:
B/P:
HR:
Resp:
O_2 Sat:
Pain:
GCS:
BGL:

Vital Sign – Set 3
AVPU:
B/P:
HR:
Resp:
O_2 Sat:
Pain:
GCS:
BGL:

Suggested Treatment:
Supportive care for family

Physical Exam

HEENT:
Head: Unremarkable
Eyes: Constricted and pinpoint
Ears: Unremarkable
Nose: Unremarkable
Oral Cavity: Cyanosis noted to lips and jaw is stick, rigor present

Chest:
Absent lung sounds upon auscultation in all lobes
No external trauma noted

Back:
Mottling noted

Abdomen/Pelvis:
No trauma noted
Pelvis stable

Extremity:
No trauma noted to legs or arms
Upper extremities noted to have rigor

Other:
Skin: Pale and cold to the touch

HPI: Patient is breastfeeding and has no complications with intake or output. Normal diapers yesterday and no illnesses to report

S/S:

Allergies: None

Medications: None

PmHx: Full term birth with no complications during pregnancy

Last Meal: Patient ate before bed around 2200 the night before

Events Prior:

Current on Immunizations? Yes

Patient Weight: 7.3kg

Notes:
PD remains present as EMS unzips onesie to assess patient

EMS triages code black within 8 minutes of arriving on scene

PD accepts responsibility for patient

Transport Consideration:

SUDDEN INFANT DEATH SYNDROME

Additional Things to Consider about the Scene:

- Assessing where the patient is found and/or sleeping area is important for documentation
- Noting guardians' reaction and documentation of their account of event
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Preservation of scene as this is a death investigation until the coroner states otherwise
- If needed, notify medical control early
- Availability and contact with either service chaplain and/or faith-based leader for family
- Working with PD on who will give the death notification to family
- Being aware of verbiage to use and respectful acts towards family during notification
- Anticipate anger and/or other reactions from family
- Stay calm. Family will ask hard questions and you may not have the answers they want to hear

Additional Educational Resources to Consider:

- CHaD Injury Prevention/Safe Sleep Program
  - www.chadkids.org/injury-prevention/safe-sleep-new-hampshire-infants
- New Hampshire Child Fatality Review Committee
  - https://www.dhhs.nh.gov/about-dhhs/advisory-organizations/child-fatality-review-committee
- New Hampshire Sudden Unexpected Infant Death
  - https://www.dhhs.nh.gov/programs-services/child-protection-juvenile-justice/sudden-unexpected-infant-death

Things to consider based on your EMS protocols, procedures and/or policies:

_Is there a local Safe Sleep Instructor in your area? _____

_____

_____

*Graphic obtained from kokomoperspective.com

CARDIAC ARREST 3y/o

This scenario is dedicated to the memory of Ciaran O'Shea of Stratham, New Hampshire. Ciaran was a lover of nature, the water, books and construction vehicles.

Goals/Objectives:
- Understand that compressions, ventilation & defibrillation are the foundation of pediatric cardiac arrest care.
- Recognize the need for rapid defibrillation.
- Recognize that adult defibrillator pads/energy should be utilized in the absence of pediatric pads.

Dispatch Information
You are responding to reports of multiple people injured by a lightning strike at a local picnic area including a 3 year old who is unresponsive.

Chief Complaint:
Unresponsive

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- A summer day in June. 82 degrees F outside. Around 1600. You had an 8-minute response time.
- You arrive on scene and are directed by various people to a picnic area under a large tree that is smoldering.

Initial Impression: Patient is a three year old boy who is lying on the ground with a man performing CPR and a woman performing mouth to mouth resuscitation.

Vital Sign – Set 1
AVPU: Unresponsive
B/P: Unable to obtain
HR: Unable to obtain
Resp: 0
O_2Sat: 0%
Pain:
GCS: 3
BGL: 78

Vital Sign – Set 2
AVPU: Unresponsive
B/P: Unable to obtain
HR: Unable to obtain
Resp: 0
O_2Sat: 0%
Pain:
GCS: 3
BGL:

Vital Sign – Set 3
AVPU: Unresponsive
B/P: Unable to obtain
HR: Unable to obtain
Resp: 0
O_2Sat: 0%
Pain:
GCS: 3
BGL:

Physical Exam

HEENT:
Head: Unremarkable
Eyes: Dilated
Ears: Unremarkable
Nose: Unremarkable
Lips: Cyanosis

Chest:
Shirt is burned/blackened. Large burn/entrance wound on right shoulder.

Back:
Unremarkable

Abdomen/Pelvis:
Large fern shaped marks are noted.

Extremity:
Left shoe is missing; there is a large burn/exit wound on the dorsal aspect of the foot.

Other:
Skin: Pale, grayish.

HPI: Patient was enjoying a picnic with his family when the tree they were under was struck by lightning.

S/S: Pt is pulseless and apneic.

Allergies: NKDA

Medications: None

PmHx: None

Last Meal: Burgers & corn

Events Prior: Patient was playing under tree when lightning struck.

Current on Immunizations? Yes

Patient Weight: 17 kg

Notes:
You have an adult AED available, but no pediatric pads.

Body Temp:

ECG: Ventricular fibrillation

Patient triage cold blue. CPR is continued.

Suggested Treatment:
CPR, Ventilation with O_2, Defibrillation, Airway Management, IV, Medications

Transport Consideration:
Patient must be secured with a size appropriate device to the stretcher for transport.

CARDIAC ARREST 3y/o

This scenario is dedicated to the memory of Ciaran O'Shea of Stratham, New Hampshire. Ciaran was a lover of nature, the water, books and construction vehicles.

Additional Things to Consider about the Scene:

- Family centered care
  - Ask family if they want to be present during resuscitation efforts
    - Family Presence information below
  - If available, assign someone to stay with family and keep them updated and involved

Additional Things to Consider during Treatment/Transport:

- Compressions, ventilation and defibrillation are the foundations of pediatric cardiac arrest care.
- Pediatric defibrillation is optimally performed with an AED equipped with pediatric pads that can deliver pediatric energy.
  - If pediatric pads are not available, adult pads and energy should be immediately used.
- Initial resuscitation of the pediatric patient should be performed on scene.
- Transport to the nearest appropriate facility.

Additional Educational Resources to Consider:

- Pediatric Advanced Life Support (PALS)
  - https://acls-algorithms.com/pediatric-advanced-life-support/

Family presence during pediatric cardiac arrest:

Family presence is strongly supported during pediatric resuscitation.
Studies show:

- Most parents want the opportunity to remain with their child during resuscitation
- They believe it is their right
- They believe it is beneficial to the patient
- Family present during the resuscitation of a child who died reported it helped with their adjustment to the death and the grieving process
- Studies of hospital personnel suggest that the presence of a family member, in most instances, was not stressful to staff and did not negatively impact staff performance

EMS provider support after critical pediatric incident:

Pediatric patients often take an extra toll on us. Your well-being is the highest priority.

- Critical Incident Stress Debriefing (CISD)
  - Recommended by AAP and AHA
  - CISD can provide emotional support, processing of the experience, promote education and improve team dynamics.
- Self care to include reflection, exercise, rest, water and healthy nutrition.
- Seek peer and professional support
  - 988 Suicide/Crisis Hotline
  - Employee Assistance Program (EAP)
  - NAMI for EMS: https://www.naemt.org/resources/wellness/ems-mental-health
  - NH Disaster Behavioral Health Response Team (DBHRT) (603)892-8924

CARDIAC ARREST 4y/o

Goals/Objectives:
- Assess and secure airway
- Recognition of obstruction
- Recognition of respiratory distress and/or failure
- Recognition of transport necessity

Dispatch Information:
You are called to a local restaurant when the caller states a 4-year-old male is having difficulty breathing and speaking. Patient was eating dinner with his family when everyone started screaming and one male starting patting patient on the back. Patient is coughing now, but unable to speak

Chief Complaint:
Difficulty Breathing; Possible Choking

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- A spring day in April. 72 degrees F outside. Around 1800. You had a 3-minute response time as you were down the road
- You arrive to the restaurant and are escorted back to a room decorated in birthday balloons and presents
- Adults are moving other children and point you to a corner when a child and man are standing

Initial Impression: Patient is standing with male behind him. Patient's face is red, and he looks at you momentarily and then back to the floor. Patient is noted to be wearing an "I am 3" t-shirt. Patient stops coughing as you approach him.

Vital Sign – Set 1 (Distress)
AVPU: Alert
B/P: Unable to obtain
HR: 100, weak
Resp: 32, labored
O_2 Sat: 88% (room air)
Pain:
GCS: 12 (4, 2, 6)
BGL:

Vital Sign – Set 2 (Failure)
AVPU: Unresponsive
B/P: Unable to obtain
HR: 80, weak
Resp: 42, labored, shallow
O_2 Sat: Unable to obtain
Pain:
GCS: 3 (1, 1, 1)
BGL: 94 mg/dl

Vital Sign – Set 3 (Code Blue)
AVPU: Unresponsive
B/P: Unable to obtain
HR: 50, weak
Resp: 0
O_2 Sat: Unable to obtain
Pain:
GCS: 3 (1, 1, 1)
BGL:

Suggested Treatment:
O_2, Monitor, Airway Management, IV, Medications

Physical Exam

HEENT:
Head: Bobbing with each breath
Eyes: PERL
Ears: Unremarkable
Nose: Nasal flaring noted
Oral Cavity: Small object seen in back of throat
Lips are noted to have cyanosis present

Chest:
Poor chest rise and fall noted, almost absent
Inspiratory stridor noted, retractions present
No external trauma noted

Back:
Unremarkable

Abdomen/Pelvis:
No guarding noted upon quadrant palpation
No trauma noted
Pelvis stable

Extremity:
No trauma noted to legs or arms
PMS x 4

Other:
Skin: Pale, Warm, Moist
No step off's or tenderness noted to neck

HPI: Patient was eating some pizza and started coughing

S/S: Tachypnea, Stridor, Retractions, Inability to cough

Allergies: NKDA

Medications: Multivitamin

PmHx: None

Last Meal: Currently eating

Events Prior: Kept running around while eating

Current on Immunizations? Yes

Patient Weight: 18 kg

Notes:
Body Temp:

ECG: Sinus Tachycardia to Bradycardia

Patient triage code blue. CPR is started

You have pediatric Magill forceps available

Transport Consideration:
Securing patient properly on cot

CARDIAC ARREST 4y/o

Additional Things to Consider about the Scene:

- Family and Provider Care - see page 24
  - Ask family if they want to be present during resuscitation efforts
  - If available assign someone to stay with family and keep them updated on care

Additional Things to Consider during Treatment/Transport:

- Modesty of the patient when performing CPR
- 3 most common causes of upper airway obstruction; infection, airway swelling and foreign body airway obstruction
- Management of FBAO; Evaluate, Identify, Intervene
- Do not perform a blind finger sweep. This can lodge an object further into the trachea
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- Pediatric Advanced Life Support (PALS)
  - https://acls-algorithms.com/pediatric-advanced-life-support/

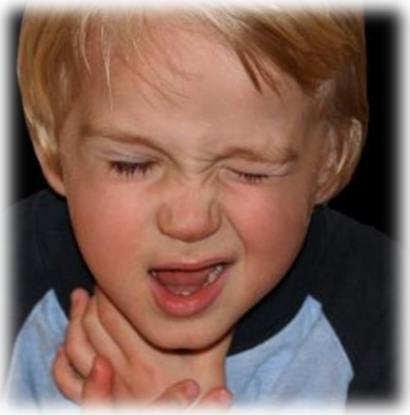
Conscious

<1 year: Give 5 back slaps
then 5 chest thrusts
>1 year: Abdominal thrusts

Unconscious

Start CPR

Universal Sign of Choking



Things to consider based on your EMS protocols, procedures and/or policies:

_____

_____

_____

_____

*Graphic 1 obtained from Healthwise *Graphic 2 obtained from goodtoknow *Graphic 3 obtained from Potomac Pediatrics

CARDIAC ARREST 11y/o

Goals/Objectives:
- Assess and secure airway
- Recognition of additional resources early in call
- Use of resources/tools
- Recognition of transport necessity

Dispatch Information:
You are dispatched to the local elementary school. The caller advised that there was a basketball tournament being played and an 11-year-old player collapsed while running down the court. The caller advises that another person has been sent to get the AED. Caller relays dispatch CPR instructions to other bystanders treating the patient.

Chief Complaint:
Unresponsive, CPR in progress

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- It is a Saturday in early November. It is 42 degrees F outside and cloudy
- You are escorted by other bystanders to the hallway opposite the gymnasium door you entered
- You see an off-duty firefighter/EMT doing compressions. An AED is attached and counting down to the next shock

Initial Impression: Patient is lying supine on the ground with his chest exposed and AED patches correctly placed.

Vital Sign – Set 1
AVPU: Unresponsive
B/P: Unable to obtain
HR: 0
Resp: 0
O_2 Sat: Unable to obtain
Pain:
GCS: 3 (1, 1, 1)
BGL:

Vital Sign – Set 2
AVPU: Unresponsive
B/P: Unable to obtain
HR: 0
Resp: 0
O_2 Sat: Intubated, Capnography applied
Pain:
GCS: 3 (1, 1, 1)
BGL: 72 mg/dl

Vital Sign – Set 3
AVPU: Unresponsive
B/P: Unable to obtain
HR: 0
Resp: 0
O_2 Sat: Intubated
Pain:
GCS: 3 (1, 1, 1)
BGL:

Suggested Treatment:
O_2, Airway Management, Monitor, IV/IO access, Medications, CPR, Defibrillation

Physical Exam

HEENT:
Head: Unremarkable
Eyes: Sluggish, left nonreactive
Ears: Unremarkable
Nose: Unremarkable
Oral Cavity: Dry

Chest:
Equal chest rise and fall noted with BVM
No external trauma noted

Back:
Unremarkable

Abdomen/Pelvis:
No trauma noted
Pelvis stable

Extremity:
No trauma noted to legs or arms
All extremities are flaccid

Other:
Skin: Pale, Cool, Dry
No step off's noted to neck

After airway is secured, lung sounds are noted to be present and equal in all lobes. Chest rise is adequate with ventilations

HPI: Patient was playing basketball and showed no signs of distress or fatigue. Coach states that patient has not been sick recently

S/S: Unresponsive, apneic, pulseless

Allergies: Unknown

Medications: Unknown

PmHx: Unknown

Last Meal: Snack before the game

Events Prior: Patient played the first quarter and the 5 minutes of the second quarter. Patient collapsed without warning while running

Current on Immunizations? Unknown

Patient Weight: 40kg

Notes:
Body Temp: 98.0 F

ECG: Asystole

CPR is being properly performed

Coach attempting to contact patient's legal guardian. Aunt and uncle on scene

Transport Consideration:
Securing child properly on cot

CARDIAC ARREST 11y/o

Additional Things to Consider about the Scene:

- Family and Provider Care - see page 24
  - Ask family if they want to be present during resuscitation efforts
  - If available assign someone to stay with family and keep them updated on care

Additional Things to Consider during Treatment/Transport:

- Exact down time, use of an AED, bystander effective CPR
- Modesty of patient and respect for family and bystanders when performing CPR
- Most common causes of Sudden Cardiac Arrest in children are structural cardiac abnormalities
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- American Academy of Pediatrics: Healthy Children
  - www.healthychildren.org/English/health-issues/conditions/heart/Pages/default.aspx
  - www.healthychildren.org/English/news/Pages/Understanding-Pediatric-Sudden-Cardiac-Arrest.aspx

Things to consider based on your EMS protocols, procedures and/or policies:

_Community AED locations _____

_____

_____

_____

*Graphic obtained from defibshop.co.uk

RESPIRATORY SCENARIOS

ASTHMA

Goals/Objectives:
- Assess and secure airway
- Treatment of asthma, primary and secondary levels of treatment
- Recognition of transport necessity

Dispatch Information:
You are responding to a 10-year-old female with difficulty breathing. Caller states that two breathing treatments have been given with no improvement. Caller says this was a sudden onset and the patient does have a history of asthma.

Chief Complaint:
Difficulty Breathing

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- The patient is sitting on front porch with adults and a few other children of same age around
- It is an August evening with ambient temperature noted to be 82 degrees Fahrenheit. Dusty and dry outside

Initial Impression: Patient is sitting with arms tight to her body pushing against concrete step. Patient is leaning forward at the hips. Mouth is open, skin on face noted to be pale and damp with sweat. Patient looks up at you as you approach.

Vital Sign – Set 1
AVPU: Alert
B/P: 110/52
HR: 134, regular
Resp: 48, labored
O_2 Sat: 88% (room air)
Pain: 0
GSC: 15
BGL: (see below if requested)

Vital Sign – Set 2
AVPU: Alert
B/P: 99/62
HR: 128, regular
Resp: 44, labored
O_2 Sat: 94% (Neb/O_2 applied); 86% (no Neb/O_2 applied)
Pain: 0
GSC: 15
BGL: 87 mg/dl

Vital Sign – Set 3
AVPU: Alert
B/P: 98/70
HR: 130, regular
Resp: 40, labored
O_2 Sat: 98% (O_2/Neb applied); 80% (no Neb/O_2 applied)
Pain: 0
GSC: 15
BGL:

Suggested Treatment:
O2, Medications, Monitor

Physical Exam

HEENT:
Head: No trauma noted
Eyes: PERL
Ears: Unremarkable
Nose: Unremarkable
Oral Cavity: Dry, pale
Patient able to clear and control own airway

Chest:
Equal chest rise and fall noted
Audible wheezing upper lung fields
Minimal air movement in lower fields
Shallow breathing with retractions and accessory muscle usage noted

Back:
No external trauma noted

Abdomen/Pelvis:
All quadrants soft and non-tender
Pelvis stable

Extremity:
No trauma noted to legs or arms
PMS x 4

Other:
Skin: warm, pale, and damp

HPI: Trouble breathing for last 20 min

S/S: Pale, tripoding, tachypneic

Allergies: NKDA

Medications: Multivitamin, Albuterol inhaler; daily, rescue inhaler; PRN

PmHx: Asthma

Last Meal: Dinner, approx. 1hr ago

Events Prior: Patient forgot to take inhaler dose this morning. Patient was playing with her siblings when she started gasping for air

Current on Immunizations? Yes

Patient Weight: 35kg

Notes:
Body Temp: 98.6 F

EKG: Sinus Tachycardia, no ectopy

If no oxygen applied, SpO_2 does not improve

If no nebulizer or steroids are given, patient continues to worsen during transport to hospital

Transport Consideration:
Securing patient properly on cot
Parent or guardian ride along

ASTHMA

Additional Things to Consider about the Scene:

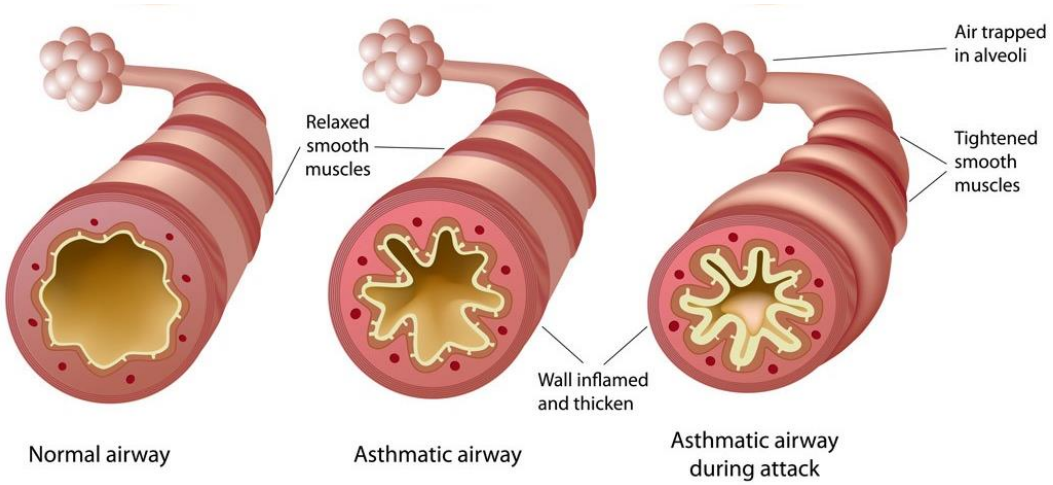
- Is the Albuterol at home in date
- What kind of system does the patient use for treatments
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Remove patient from any irritants present
- Any recent illnesses or new foods
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- American Academy of Pediatrics: Healthy Children
  - https://www.healthychildren.org/English/health-issues/conditions/allergies-asthma/Pages/Asthma-Fables-and-Facts.aspx
- Easy Auscultation: Lung Sounds Training Sessions
  - https://www.easyauscultation.com/lung-sounds



Things to consider based on your EMS protocols, procedures and/or policies:

*Graphic obtained from simplybiology.com

CROUP

Goals/Objectives:
- Assess and secure airway
- Recognition of importance for position of comfort
- Recognition of transport necessity

Dispatch Information:
You are called to an apartment complex for a 4-year-old female having trouble breathing. Patient was asleep and woke her mother up saying she was coughing. Patient also has a fever and mother does not have any medication to give her at home.

Chief Complaint:
Difficulty Breathing

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- It is January, 18 degrees F outside and 0230
- A young child is seen waving you down in the middle of the roadway and directs you to the apartment
- You enter the apartment to find a female holding a child on the bathroom floor. The shower is running

Initial Impression: Patient is in apparent distress and only looks at you for a second as you enter the room. The child is limp and wearing a pullup and t-shirt. Patient is noted to have a deep bark-like cough with no mucous production.

Vital Sign – Set 1
AVPU: Alert
B/P: 110/60
HR: 130, regular
Resp: 18, labored
O_2 Sat: 92% (room air)
Pain:
GCS: 15 (4, 5, 6)
BGL:

Vital Sign – Set 2
AVPU: Alert
B/P: 116/70
HR: 128, regular
Resp: 16, labored
O_2 Sat: 96% (O_2), 92% (room air)
Pain: 2
GCS: 15 (4, 5, 6)
BGL: 72 mg/dl (if obtained)

Vital Sign – Set 3
AVPU: Alert
B/P: 116/66
HR: 132, regular
Resp: 18, labored
O_2 Sat: 96% (O2), 90% (room air)
Pain: 2
GCS: 15 (4, 5, 6)
BGL:

Physical Exam

HEENT:
Head: Unremarkable
Eyes: PERL
Ears: Unremarkable
Nose: Nasal flaring noted
Oral Cavity: Lips are dry and cracked

Chest:
Equal chest rise and fall noted, shallow
Inspiratory stridor and slight retractions noted
No external trauma noted

Back:
Unremarkable

Abdomen/Pelvis:
No guarding noted upon quadrant palpation
No trauma noted
Pelvis stable

Extremity:
No trauma noted to legs or arms
PMS x 4

Other:
Skin: Pink, Hot, Dry
No step off's or tenderness noted to neck

HPI: Sudden onset of coughing

S/S: Labored breathing, Hoarse and deep cough, fever

Allergies: NKDA

Medications: Multivitamin

PmHx: None

Last Meal: Dinner at 1830

Events Prior: Patient was sleeping in her room. She has had a cold for the last several days

Current on Immunizations? No

Patient Weight: 21kg

Notes:
Body Temp: 101.4 F

ECG: Sinus Tachycardia

As you take the child outside, you note a relaxation and decreased coughing

Patient can speak in 3 to 4-word sentences

Suggested Treatment: O_2, Medications, Monitor, Airway management, Positioning

Transport Consideration:
Securing patient properly on cot
Position of comfort

CROUP

Additional Things to Consider about the Scene:

- Are any other family members sick
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Keeping the patient calm is imperative as the airway is already compromised
- Is the child scheduled to see a pediatrician for an immunization update
- When transporting, do not have the heater on full blast nor pointed directly on patient
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- Boston Children's Hospital: Croup
  - https://www.childrenshospital.org/conditions/croup
- OPENPediatrics Pediatric Respiratory Education Playlist
  - https://www.youtube.com/playlist?list=PLJmgkNI4ruzzDp2NiXLP1lu_fN3RceH9B
- Easy Auscultation: Lung Sounds Training Sessions
  - https://www.easyauscultation.com/lung-sounds

Things to consider based on your EMS protocols, procedures and/or policies:

_____

_____

_____

_____

BRONCHIOLITIS

Goals/Objectives:
- Assess and secure airway
- Recognition of importance for position of comfort
- Recognition of transport necessity

Dispatch Information:
You are dispatched to a home for a 2-month old male having trouble breathing and feeding. Patient has been ill last 2-3 days with fever, cough and runny nose.

Chief Complaint:
Increasing difficulty breathing, fatigue

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- Early December, mid-morning around 0930
- Mom meets you at the door holding patient, both appear anxious.
- Patient crying and whining intermittently without ability to be consoled.

Initial Impression: Patient is noted as restless with respiratory distress, high work of breathing with sub-costal retractions.

Vital Sign – Set 1
AVPU: Alert
B/P: 75/45
HR: 180, regular
Resp: 70, shallow
O_2 Sat: 88% (room air)
Pain:
GCS: 15 (4,5,6)
BGL:

Vital Sign – Set 2
AVPU: Alert
B/P: 75/46
HR: 175, regular
Resp: 68, shallow
O_2 Sat: 93% (O2), 86% (room air)
Pain: 0
GCS: 15 (4, 5, 6)
BGL: 94 mg/dl

Vital Sign – Set 3
AVPU: Alert
B/P: 76/48
HR: 160, regular
Resp: 64, shallow
O_2 Sat: 94% (O2/neb), 86% (room air)
Pain: 0
GCS: 15 (4, 5, 6)
BGL:

Physical Exam

HEENT:
Head: Unremarkable
Eyes: PERL
Ears: Unremarkable
Nose: Nasal discharge, nasal flaring
Oral Cavity: Unremarkable, Cough noted

Chest:
Equal chest rise and fall noted, shallow
Coarse crackles and wheezing upon expiration
Retractions present
No external trauma noted

Back:
Unremarkable

Abdomen/Pelvis:
No guarding noted upon quadrant palpation No trauma noted
Pelvis stable

Extremity:
No trauma noted to legs or arms
PMS x 4

Other:
Skin: Pale, Warm, Moist
No step offs or tenderness noted to neck

HPI: Patient has been ill for 3 days otherwise healthy

S/S: Shortness of breath, Fever

Allergies: NKDA

Medications: None

PmHx: Recent illness

Last Meal: Frequent poor feeds

Events Prior: Patient woke at 0800 and has been inconsolable and struggling to feed since then.

Current on Immunizations? Yes

Patient Weight: 5kg

Notes:
Body Temp: 101.0 F

ECG: Sinus Tachycardia

Patient cries/whines intermittently

Patient seems to be tiring

Suggested Treatment:
O_2, Monitor, Airway Management, IV, Fluids

Transport Consideration:
Securing patient properly on cot

BRONCHIOLITIS

Additional Things to Consider about the Scene:

- Family centered care

Additional Things to Consider during Treatment/Transport:

- Continuous monitoring and notation of lung sound changes and patient's work of breathing
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- Boston Children's Hospital Bronchiolitis
  - https://www.childrenshospital.org/conditions/bronchiolitis
- OPENPediatrics Pediatric Respiratory Education Playlist
  - https://www.youtube.com/playlist?list=PLJmgkNI4ruzzDp2NiXLP1lu_fN3RceH9B
- Easy Auscultation: Lung Sounds Training Sessions
  - https://www.easyauscultation.com/lung-sounds

Things to consider based on your EMS protocols, procedures and/or policies:

TRACHEOSTOMY

Goals/Objectives:
- Assess and maintain airway
- Recognition of need to suction trach
- Recognition of transport necessity

Dispatch Information:
You are responding to a 2-year-old male with difficulty breathing. Patient has a tracheostomy since motor vehicle accident that happened six months ago. He has also had a fever for the last several days. Patient is on his own ventilator that parent is willing to operate during transport.

Chief Complaint:
Difficulty breathing, Fever

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- As you arrive, you note a wheelchair ramp to the front porch, leading from the driveway
- Patient has a trach and is on a home ventilator. Hallways are wide enough for a cot to be maneuvered
- Patient's mother says she had to increase patient's FiO_2 on the ventilator from his normal 30% to 80% to keep his SpO_2 normal.

Initial Impression: Patient is sitting in an at-home hospital bed, semi-fowler's position. You hear noisy breathing and the patient has a wet cough with weak effort. He looks at you when you enter the room.

Vital Sign – Set 1
AVPU: Alert
B/P: 88/56
HR: 124, regular
Resp: 40, shallow
O_2 Sat: 98% (FiO_2 80%)
Pain: 0
GSC: 12 (able to make sounds)
BGL: (see below if requested)

Vital Sign – Set 2
AVPU: Alert
BP: 90/58
HR: 122, regular
Resp: 44, shallow
O_2 Sat: 98% (FiO_2 80%)
Pain: 0
GSC: 12 (able to make sounds)
BGL: 90 mg/dl

Vital Sign – Set 3
AVPU: Alert
B/P: 87/56
HR: 126, regular
Resp: 40, shallow (no change with any treatments)
O_2 Sat: 98% (FiO_2 80%)
Pain: 0
GSC: 12 (able to make sounds)
BGL:

Suggested Treatment:
Suction, O_2, Steroids, position of comfort, monitor

Physical Exam

HEENT:
Head: No trauma noted
Eyes: PERL, Spontaneous movement
Ears: Unremarkable
Nose: Some nasal drainage, yellow/cloudy;
Neck: Trach in place, secured around the neck
Oral Cavity: Pink, slightly dry; mom recently applied chapstick-type protectant to lips

Chest:
Equal chest rise and fall noted
Coarse lung sounds
Shallow breathing, nonlabored
Frequent weak coughs, wet

Back:
No external trauma noted

Abdomen/Pelvis:
All quadrants soft and non-tender
Pelvis stable
GI tube in place, looks clean

Extremity:
No trauma noted to legs or arms

Other:
Skin: hot to touch, flushed
No recent trauma known

HPI: Fever for three days, increasing congestion. More lethargic than normal. Normally off except for at night, but today 100% usage

S/S: Fever, skin hot and flushed, tachycardic, lethargic, decreased SpO_2

Allergies: Penicillin (hives)

Medications: Tylenol, ibuprofen for fever; probiotics, multivitamin, DHA

PmHx: MVC resulting TBI; pneumonia

Last Meal: via GI tube, 2 hour ago

Current on Immunizations? Yes

Patient Weight: 12.7kg

Notes:
Body Temp: 103.2 F

EKG: Sinus Tachycardia, no ectopy

Patient uses cloth diapers, which mom recently changed; fewer number of wet diapers than normal.

Patient's mom can accompany patient & operate the transport ventilator

Transport Consideration:
Securing patient properly on cot, Parent ride along/ventilator use

TRACHEOSTOMY

Additional Things to Consider about the Scene:

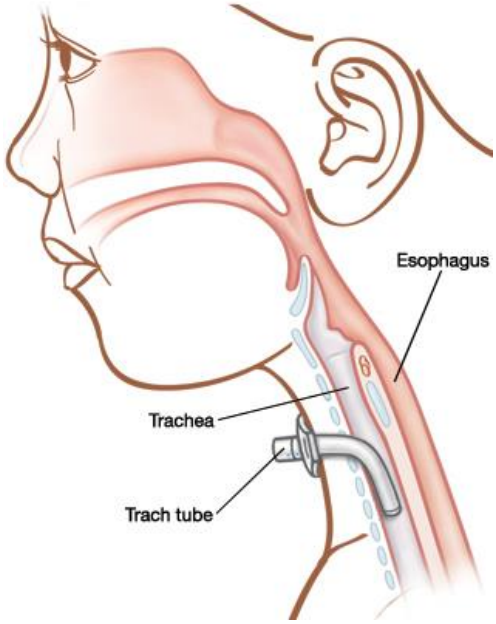
- Maintain as sterile environment as you can
- Family centered care

Additional Things to Consider during Treatment/Transport:

- The guardian/care provider is often the best resource
- D-O-P-E = **D**islodged, **O**bstructed, **P**neumothorax, **E**quipment
- Alerting receiving hospital about additional medical needs; ventilator, replacement trach
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- Nationwide Children's
    - www.nationwidechildrens.org/tracheostomy-care-how-to-suction-your-childs-trach-tube



Things to consider based on your EMS protocols, procedures and/or policies:

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_____

_____

_____

*Graphic 1 obtained from amdnext.com *Graphic 2 obtained from Fairview.org

TRAUMA SCENARIOS

CHILD ABUSE

Goals/Objectives:
- Stay nonjudgmental and calm
- Recognition of suspected abuse, injury pattern
- Recognition of transport necessity to appropriate facility

Dispatch Information:
You are dispatched to a 2-year-old lethargic male patient at a local daycare. Guardian dropped off the patient approximately 20 minutes ago and stated that the patient was more tired this morning than normal. Staff states that the patient is now vomiting and keeps falling asleep.

Chief Complaint:
Lethargic patient, vomiting

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- It is a warm, summer morning at 0815
- Patient is found in the front office being held by a staff member. Another member is trying to make contact with family
- Patient is noted to be in his long sleeve pajamas. Staff state these are the clothes that he came in this morning
- Small amounts of vomitus is noted on patients hands, shirt and on the staff member holding him

Initial Impression: Patient makes no eye contact with EMS upon arrival and lays limp without movement during your assessment. Bruising is noted on the patients left ear and he moans when you touch the left side of his head

Vital Sign – Set 1
AVPU: Verbal
B/P: 90/60
HR: 130, regular
Resp: 24, shallow
O_2 Sat: 96% (room air)
Pain:
GCS: 10 (3,3,4)
BGL:

Vital Sign – Set 2
AVPU: Verbal
B/P: 94/82
HR: 126, regular
Resp: 24, shallow
O_2 Sat: 98% (O_2) and 96% (room air)
Pain:
GCS: 10 (3,3,4)
BGL: 80 mg/dl (if assessed)

Vital Sign – Set 3
AVPU: Verbal
B/P: 96/76
HR: 132, regular
Resp: 24, shallow
O_2 Sat: 98% (O_2)
Pain:
GCS: 10 (3,3,4)
BGL:

Suggested Treatment:
O_2, Monitor, IV access

Physical Exam

HEENT:
Head: Hematoma noted to the left temporal
Eyes: Left pupil is sluggish, Right is dilated
Ears: Bruising noted to left ear
Nose: Unremarkable
Oral Cavity: Child is missing teeth
Patient able to clear and control own airway

Chest:
Equal chest rise and fall noted, shallow
Lung sounds clear
Bruises of different colors noted to left side

Back:
Red marks are noted on left lower back

Abdomen/Pelvis:
Guarding noted in left lower quadrant
Slight distention noted to upper quadrants
Pelvis stable

Extremity:
Bruising noted to upper extremities
PMS x 4 (presumed, since child moves limb away when pain applied)

Other:
Skin: Pale, warm
Patient moans when neck is palpated

HPI: Patient refused to wake for breakfast. 5 minutes after, he started projectile vomiting

S/S: Vomited approx. 50cc's

Allergies: None on file

Medications: None on file

PmHx: An unexplained seizure approx. 4 weeks ago

Last Meal: Patient refused breakfast

Events Prior: Patient has laid on the floor since being brought to school. Guardian denied any illnesses

Current on Immunizations? Yes

Patient Weight: 9kg

Notes:
ECG: Sinus Tachycardia

Staff notes that patient has been having increased wet diapers and scares easily the last few weeks

Staff state that no injury reports had been filed recently at school

Transport Consideration:
Securing patient properly on cot
Appropriate trauma facility

CHILD ABUSE

Additional Things to Consider about the Scene:

- Has staff noted any behavioral changes
- Is the incident described possible with injury patterns and/or evidence visualized on scene
- Family centered care; in this case, the daycare facility staff members

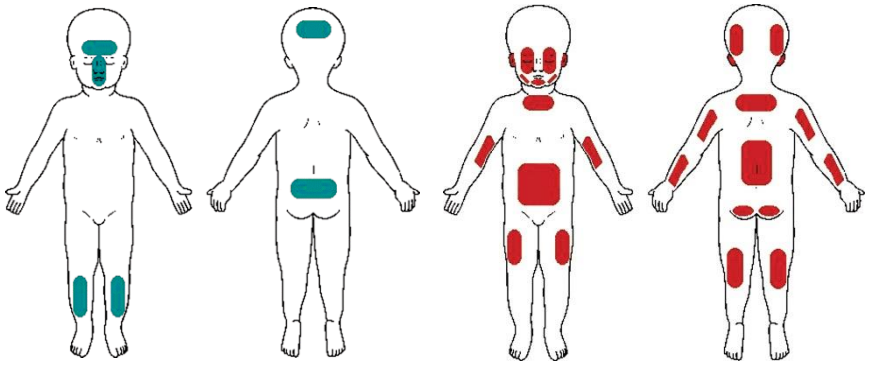
Additional Things to Consider during Treatment/Transport:

- Remove patient from dangerous or unhealthy situation and transport to hospital
- Trending of vital signs is important when considering suspected head trauma
- Documentation of statements by individuals on scene needs to be properly quoted
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility
- State law in New Hampshire states that as a prehospital care provider, you are a mandatory reporter of suspected child abuse. Follow local policy and procedure for reporting

Additional Educational Resources to Consider:

- New Hampshire Department for Children and Families
  - https://www.dhhs.nh.gov/programs-services/child-protection-juvenile-justice
  - Reports of Abuse, Neglect and Exploitation of an Adult or Child may be made to the New Hampshire DCYF Report Center.
    - By phone: 603-271-6562
    - Online: www.dhhs.nh.gov/report-concern/report-child-abuse
- Online child abuse recognition education provided by Children's Hospital Colorado
  - http://www.identifychildabuse.org/

Accidental Bruising Patterns



Abusive Bruising Patterns

Things to consider based on your EMS protocols, procedures and/or policies:

_Nearest trauma center (see page 60) _____

_____

_____

_____

*Graphic obtained from Pediatric EM Morsels

MOTOR VEHICLE CRASH

Goals/Objectives:
- Remove patient from dangers
- Assess and secure airway
- Recognition of Cushing's Triad
- Recognition of transport necessity to most appropriate facility

Dispatch Information:
You are responding to a rollover accident with a known fatality of the driver and a 4-year-old ejected patient. Vehicle was traveling at highway speeds when it lost control and rolled 3 times after going off the road. A nurse is on scene maintain c-spine and is triaging code red.

Chief Complaint:
MVC, Ejection

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- Summer afternoon around 1500. A thunderstorm came through last night and area received 2 inches of rain
- The patient is found approximately 10 feet from the vehicle. Extensive damage is noted to SUV
- Patient is face up in a muddy field with bystanders at his side

Initial Impression: Multi-system trauma patient. Patient ejected and found approximately 10 feet from vehicle.

Vital Sign – Set 1
AVPU: Painful appropriate
B/P: 130/80
HR: 70, regular
Resp: 14, shallow
O_2 Sat: 94% (room air)
Pain:
GCS: 9 (2, 2, 5)
BGL:

Vital Sign – Set 2
AVPU: Painful appropriate
B/P: 134/80
HR: 68, regular
Resp: 12, shallow
O_2 Sat: 94% (O2) 90% (room air)
Pain:
GCS: 9 (2, 2, 5)
BGL: 80 mg/dl (if assessed)

Vital Sign – Set 3
AVPU: Painful appropriate
B/P: 140/90
HR: 52, regular
Resp: 12, shallow
O_2 Sat: 96% (Interventions) 88% (Room air or just O_2)
Pain:
GCS: 9 (2, 2, 5)
BGL:

Physical Exam

HEENT:
Head: Abrasion noted to right temporal
Eyes: Sluggish
Ears: Unremarkable
Nose: Blood noted to right nostril
Oral Cavity: Unremarkable
Patient currently breathing on his own

Chest:
Equal chest rise and fall noted, shallow
Lung sounds clear, slightly diminished in right upper lobe
Laceration noted to right thoracic, no blood

Back:
Redness noted to right lower back

Abdomen/Pelvis:
No rebound tenderness noted
Pelvis stable

Extremity:
Small lacerations noted to all extremities
Bleeding is controlled. No deformities noted
PMS x 4 (presumed, since child moves limb away when pain applied)

Other:
Skin: Pale, warm
No step off's or tenderness noted to neck

Patient whimpers as you palpate extremities during your assessment

HPI: Bystanders state that the patient came out of an open window on the 2nd rollover of the vehicle

S/S: Decreased LOC, Incontinence noted, shallow breathing

Allergies: Unknown

Medications: Unknown

PmHx: Unknown

Last Meal: Unknown

Events Prior: Patient's vehicle was traveling at highway speed and for unknown reasons left the roadway

Current on Immunizations? Unknown

Patient Weight: 18kg

Notes:
Body Temp: 98.5 F

ECG: Sinus and Sinus Bradycardia

Patient vomits as you begin transport

Reassessment of lung sounds reveal right side is now absent (during transport)

Suggested Treatment:
O_2, Monitor, C-spine, IV, Airway management

Transport Consideration:
Securing patient properly on cot

MOTOR VEHICLE CRASH

Additional Things to Consider about the Scene:

- Provider and bystander safety; vehicle stability if working below or around vehicle
- Safe removal of patient from field to ambulance
- Family centered care

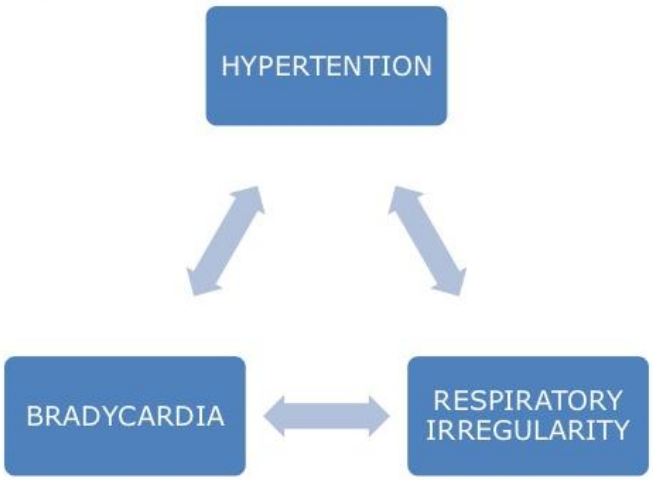
Additional Things to Consider during Treatment/Transport:

- Preparation of and for airway management
- Preparation of and for seizure activity
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- Pediatric Trauma Society: Clinical Resources
  - http://pediatrictraumasociety.org/resources/clinical-resources.cgi
- Cushing's Triad
  - http://www.emergencymedicalparamedic.com/what-is-cushings-triad/

CUSHING'S TRIAD



Things to consider based on your EMS protocols, procedures and/or policies:

_ Nearest trauma center (see page 60), with preference for Level 1 or 2 _____

_Consider air transport and Trauma Alert to hospital _____

_Take special considerations on transport of pediatric MVC patient with regards to car seats involved in MVCs and Spinal Motion Restriction; see NH Pediatric Safe Transport protocol for guidance_____

NEAR DROWNING

Goals/Objectives:
- Assess and secure airway
- Treatment of hypothermia
- Recognition of risk and/or presence of secondary trauma
- Recognition of transport necessity

Dispatch Information:
You are responding to a possible drowning at the local swimming pool. Swim lessons are being conducted, however the patient is a 4-year-old male, not participating in any class. Patient was reported underwater for 2-3 minutes.

Chief Complaint:
Difficulty Breathing

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- Community Pool going from 2 foot to 10 foot in water depth and has been open for one week
- It is a May evening with ambient temperature noted to be 64 degrees Fahrenheit
- As you arrive you note multiple parents and children crying and waving you into the gated area
- Lifeguard on scene is kneeling with patient. Patient in sitting upright position against the chain link fence

Initial Impression: Patient is in regular street clothes noted to be wet sitting upright, coughing and whimpering

Vital Sign – Set 1
AVPU: Alert
B/P: 88/52
HR: 124, regular
Resp: 28, unlabored
O_2 Sat: 92% (room air)
Pain:
GCS: 14
BGL:

Vital Sign – Set 2
AVPU: Alert
B/P: 90/62
HR: 108, regular
Resp: 24, nonlabored
O_2 Sat: 98% (O2 applied)
Pain: 0
GCS: 15
BGL: 87 mg/dl

Vital Sign – Set 3
AVPU: Alert
B/P: 90/70
HR: 112, regular
Resp: 24, nonlabored
O_2 Sat: 98% (O2 applied)
Pain: 0
GCS: 15
BGL:

Suggested Treatment:
O_2, Suction, Monitor,

Physical Exam

HEENT:
Head: No trauma noted
Eyes: PERL
Ears: Unremarkable
Nose: Clear fluid noted
Oral Cavity: Vomitus noted
Patient able to clear and control own airway

Chest:
Equal chest rise and fall noted
Crackles noted in lower lobes
Upper lung lobes clear
No external trauma noted

Back:
No external trauma noted

Abdomen/Pelvis:
No guarding noted upon quadrant palpation
All quadrants soft and slight distension noted to upper left quadrant
Pelvis stable

Extremity:
No trauma noted to legs or arms
PMS x 4

Other:
Skin: Cool, pale and damp
No step off's or tenderness noted to neck

HPI: See events prior below

S/S: Vomit, coughing, anxious

Allergies: NKDA

Medications: Multivitamin

PmHx: Unremarkable

Last Meal: Eating snack 5 min before

Events Prior: Patient was playing near pool when pregnant mother saw him leaning over to retrieve a toy

Current on Immunizations? Yes

Patient Weight: 16kg

Notes:
Body Temp: 97.1
EKG: Sinus Tachycardia

Patient vomits approx. 100mLs during packaging for transport

Transport Consideration:
Securing patient properly on cot
Parent or guardian ride along

NEAR DROWNING

Additional Things to Consider about the Scene:

- Water temperature
- Chemicals of the pool and last treatment
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Drying and warming of the patient
- Patient modesty if/when removing clothing
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- Consumer Product Safety Commission
    - https://www.cpsc.gov/safety-education/neighborhood-safety-network/toolkits/drowning-prevention
- New Hampshire Safe Kids
    - https://www.safekids.org/coalition/safe-kids-new-hampshire
- Local recreation boards

Things to consider based on your EMS protocols, procedures and/or policies:

_Nearest trauma center (see page 60) _____

_____

_____

_____

*Graphic obtained from International Drowning Research Alliance (IDRA)

BURN; SMOKE INHALATION

Goals/Objectives:
- Assess and secure airway
- Assess for risk of secondary trauma
- Recognition of transport necessity and destination

Dispatch Information:
The fire department has requested you to respond to a scene of an extinguished house fire. Patient is a 16-year-old male that was asleep in the basement when he heard the smoke detectors going off. He awoke to find a fire on the upper level of his home.

Chief Complaint:
Trouble breathing; possible smoke inhalation

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- Arrive on scene to find patient being attended to by the fire department
- Patient was reported to have gone back into the home numerous time trying to remove animals
- Home is a complete loss according to fire department

Initial Impression: Patient is having a hard time catching his breath and can only speak in short sentences. Patient is noted to have a continuous cough that produces a soot.

Vital Sign – Set 1
AVPU: Alert
B/P: 130/80
HR: 125, regular
Resp: 26, labored, shallow
O_2 Sat: 92% (room air)
Pain: 7
GCS: 15
BGL:

Vital Sign – Set 2
AVPU: Alert
B/P: 126/84
HR: 115, regular
Resp: 28, labored, shallow
O_2 Sat: 96% (O_2) 92% (room air)
Pain: 7
GCS: 15
BGL: 105 mg/dl

Vital Sign – Set 3
AVPU: Alert
B/P: 132/90
HR: 118, regular
Resp: 28, labored, shallow
O_2 Sat: 98% (nebulizer) 96% (O_2)
Pain: 7
GCS: 15
BGL:

Suggested Treatment:
O_2, Monitor, IV, Pain and Airway Management

Physical Exam

HEENT:
Head: Unremarkable
Eyes: PERL
Ears: Unremarkable
Nose: Singed nasal airs
Oral Cavity: Lips noted to be red and swollen
Patient able to clear and control own airway

Chest:
Equal chest rise and fall noted, shallow
Lung sounds diminished in all lobes
No external trauma noted

Back:
Unremarkable

Abdomen/Pelvis:
No guarding noted upon quadrant palpation
No trauma noted
Pelvis stable

Extremity:
First degree burns noted to hands
PMS x 4

Other:
Skin: Pale, warm
No step offs or tenderness noted to neck

Patient complains of throat scratching and hurting

HPI: See Events Prior

S/S: Cough; producing soot, nauseated

Allergies: NKDA

Medications: None

PmHx: Broken leg two years ago

Last Meal: Lunch 12 hours ago

Events Prior: Sleeping when awaken by house on fire. Patient spent approx. 15 minutes getting animals before fire department removed him from scene

Current on Immunizations? Yes

Patient Weight: 54kg

Notes:
Body Temp:

ECG: Sinus Tachycardia

Patient requests a drink of water numerous times during contact

Patient has increased nausea during transport

Transport Consideration:
Secure patient properly on cot
Position of comfort for breathing

BURN; SMOKE INHALATION

Additional Things to Consider about the Scene:

- Safe access and egress from fire scene
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Remove patient for burn source and/or stop the burning process
- Oxygen should be delivered via Nonrebreather at 15 liters
- O_2 saturations may ***not*** be reliable.
    - The pulse ox sensor cannot distinguish between oxygen and carbon monoxide
- Prepare to secure airway for patient if he is unable to maintain own airway
    - Prepare for increased swelling and unidentifiable landmarks
- Keep patient compartment warm in ambulance, assessing for signs of shock
- Do not fluid overload the patient. Follow protocols for proper fluid administration
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport patient in position of comfort, ease of breathing
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- American Burn Association
    - http://ameriburn.org/education/

Things to consider based on your EMS protocols, procedures and/or policies:

_Calculation method for Total Body Surface Area (TBSA) _____

_Calculation method for Fluid Resuscitation_____

_Nearest verified Burn Center_____

_Consider air transport and Trauma Alert to hospital_____

____

BURN; ACCIDENTAL SCALDING

Goals/Objectives:
- Assess and secure airway
- Recognition of splash patterns and additional burns
- Recognition of transport necessity to appropriate facility

Dispatch Information:
You are dispatched to a local retirement center when the caller states her 3-year-old grandson pulled a cup of coffee off the table and onto his face and arm. Caller states that the little boy is crying and scared but will not let go of her, so she can see the injured area.

Chief Complaint:
Burn injury

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- Escorted by security to an independent living area of the retirement community
- Female is holding patient on her lap and he has his head hidden from you as you enter the tidy living room
- Grandmother states she made a cup of coffee and set it on the table to get patient's breakfast. 16oz cup was full
- Cup noted on floor with coffee stained carpet

Initial Impression: Possible 1st and 2nd degree burns noted to visible area of patient's head, face and arm. Patient able to speak but will only talk to grandmother. No distress noted as he is crying.

Vital Sign – Set 1
AVPU: Alert
B/P: 90/60
HR: 132, regular
Resp: 24, nonlabored
O_2 Sat: 97% (room air)
Pain: 8
GCS: 15 (4, 5, 6)
BGL:

Vital Sign – Set 2
AVPU: Alert
B/P: 92/70
HR: 136, regular
Resp: 24, nonlabored
O_2 Sat: 97% (room air)
Pain: 8
GCS: 15 (4, 5, 6)
BGL: 82 mg/dl (if assessed)

Vital Sign – Set 3
AVPU: Alert
B/P: 88/64 (with medication)
HR: 130, regular
Resp: 22, nonlabored
O_2 Sat: 97% (room air)
Pain: 7 (with medication)
GCS: 15 (4, 5, 6)
BGL:

Suggested Treatment:
O_2, Monitor, IV, Pain control

Physical Exam

HEENT:
Head: Left temporal area is red and small blisters noted
Eyes: PERL
Ears: Left ear is red
Nose: Unremarkable
Oral Cavity: Unremarkable
Patient able to clear and control own airway.
Left side of face is red, small blisters noted

Chest:
Equal chest rise and fall noted
Lung sounds clear
Left side of thorax is red when exposed

Back:
Unremarkable

Abdomen/Pelvis:
No guarding noted upon quadrant palpation
No trauma noted
Pelvis stable

Extremity:
Left hand, upper and lower arm is red
PMS x 4

Other:
Skin: Warm, Pink, Dry
No step off's or tenderness noted to neck

HPI: Grandmother was 3 feet away when patient pulled cup down

S/S: Redness to left hand, lower and upper arm. Redness and blisters noted to left side of head and face

Allergies: None

Medications: Multivitamin

PmHx: None

Last Meal: Cracker 20 minutes ago

Events Prior: Patient was preparing to eat breakfast at kitchen table

Current on Immunizations? Yes

Patient Weight: 14kg

Notes:
Body Temp: 99.0

ECG: Sinus Tachycardia

Shirt is removed to reveal 1st degree burns to left thorax. Shirt is wet and smells life coffee

Patient is noted to be left handed and grandmother confirms

Transport Consideration:
Securing patient properly on cot
Position of comfort

BURN; ACCIDENTAL SCALDING

Additional Things to Consider about the Scene:

- Keep in mind splash patterns and secondary trauma sources
- Is the incident described possible with injury patterns and/or evidence visualized on scene
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Pain Control; both positional in maintaining as sterile environment as possible and medications
- When measuring TBSA, remember that first degree burns ***DO NOT*** go into the calculation
- Keep patient compartment warm in ambulance, assessing for signs of shock
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

Via Christi HEALTH

TBSA Burn Age-Based Distribution									
Area	Birth- 1 yr	1-4 yrs	5-9 yrs	10-14 yrs	15-18 yrs	Adult	2°	3°	Total
Head	19	17	13	11	9	7			
Neck	2	2	2	2	2	2			
Ant Trunk	13	13	13	13	13	13			
Post Trunk	13	13	13	13	13	13			
R. Buttock	2.5	2.5	2.5	2.5	2.5	2.5			
L. Buttock	2.5	2.5	2.5	2.5	2.5	2.5			
Genitalia	1	1	1	1	1	1			
R. U. Arm	4	4	4	4	4	4			
L. U. Arm	4	4	4	4	4	4			
L .L. Arm	3	3	3	3	3	3			
R. L. Arm	3	3	3	3	3	3			
R. Hand	2.5	2.5	2.5	2.5	2.5	2.5			
L. Hand	2.5	2.5	2.5	2.5	2.5	2.5			
R. Thigh	5.5	6.5	8	8.5	9	9.5			
L. Thigh	5.5	6.5	8	8.5	9	9.5			
R. Leg	5	5	5.5	6	6.5	7			
L. Leg	5	5	5.5	6	6.5	7			
R. Foot	3.5	3.5	3.5	3.5	3.5	3.5			
L. Foot	3.5	3.5	3.5	3.5	3.5	3.5			
Total second degree ____% + Total third degree ____% = TBSA burn ____%									

Things to consider based on your EMS protocols, procedures and/or policies:

_ Calculation method for Total Body Surface Area (TBSA) _____

_ Calculation method for Fluid Resuscitation _____

_Nearest verified Burn Center _____

_____

*Graphic obtained from Via Christi Regional Burn Center, Wichita, Kansas

MV VS PEDESTRIAN

Goals/Objectives:
- Assess and secure airway
- Control bleeding
- Treatment of hypothermia
- Assess/stabilize trauma
- Treat pain
- Recognize transport necessity

Dispatch Information:
Responding to a 4-year-old child hit by a car. Child's older sibling pulled victim to the side of road after he was hit, then ran to nearest house to call 911. Vehicle sped off after striking child, reportedly at high rate of speed.

Chief Complaint:
MVC; vehicle vs pedestrian

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- Spring Saturday afternoon, child is located on curb across from a local neighborhood park
- Patient is sitting upright and looks up as you approach. Patient's older sibling and grandmother are with him

Initial Impression: Patient is in regular street clothes noted to be sitting on curb, crying and holding head and left leg, left arm cradled to chest. Left leg noted to be bent at odd angle from thigh.

Vital Sign – Set 1
AVPU: Alert
B/P: 108/72
HR: 112, regular
Resp: 30, shallow
O_2 Sat: 96% (room air)
Pain: 8 on faces scale
GCS: 15

Vital Sign – Set 2
AVPU: Alert
B/P: 112/74
HR: 116, regular
Resp: 30, nonlabored
O_2 Sat: 96% (room air); 98% (O_2 applied)
Pain: 4(with analgesia); 10 (no analgesia)
GCS: 15
BGL: 97 mg/dl

Vital Sign – Set 3
AVPU: Alert
B/P: 110/70
HR: 112, regular
Resp: 30, nonlabored
O_2 Sat: 96% (room air); 98% (O_2 applied)
Pain: 5(with analgesia); 10 (no analgesia)
GCS: 15

Suggested Treatment:
Splinting, protect c-spine, monitor airway

Physical Exam

HEENT:
Head: Large Scrape to forehead, over left eye
Eyes: PEERL
Ears: Scrape to left ear
Nose: Dried blood noted around/under nostrils
Oral Cavity: Patient says missing a tooth; dried blood noted, no continued bleeding
Patient able to clear and control own airway

Chest:
Equal chest rise and fall noted, clear lungs
Scrapes to left side of chest and left shoulder

Back:
Patient denies pain with palpation
Scrape seen to both sides, mid-back

Abdomen/Pelvis:
No guarding noted upon quadrant palpation
Pelvis stable, but patient screams when tested/palpated

Extremity:
PMS x 4
Left leg noted to be deformed at thigh
Left clavicle noted to be deformed

Complains of left shoulder, right leg and right hip pain

Other:
Skin: warm
No step off's or tenderness noted to neck

S/S: Anxiety, tachycardic, pain; deformed L shoulder, L thigh

Allergies: NKDA

Medications: Multivitamin, Zyrtec

PmHx: None

Last Meal: Eating snack 5 min before

Events Prior: Patient was walking to park with sibling and grandmother, when he ran to catch up with brother. Grandmother reports the truck driver was looking down and traveling very fast. Patient bounced away from truck, landed and laid still for a minute and then started to cry and move

Current on Immunizations? Yes

Patient Weight: 18kg

Notes:
Body Temp: 97.1

EKG: Sinus Tachycardia

Patient's mother will meet at hospital (she is an RN there)

Patient screams with movement and splinting of extremities; also, when pelvis is tested for stability

Transport Consideration:
Securing patient properly on cot
Parent or guardian ride along

MV VS PEDESTRIAN

Additional Things to Consider about the Scene:

- Completely removing patient from roadway
- Removing patient off hot asphalt or gravel/sand
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Modesty of the patient when removing clothing for assessment
- Keeping the patient warm and assessing for signs of shock
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- Pediatric Trauma Society: Clinical Resources
  - http://pediatrictraumasociety.org/resources/clinical-resources.cgi
- Waddell's Triad of Trauma
  - http://www.emergencymedicalparamedic.com/what-is-waddell%E2%80%99s-triad-of-trauma/

Waddell's Triad

- **Femur Fracture**
- **Intraabdominal or Intrathoracic injury**
- **Head Injury**

Things to consider based on your EMS protocols, procedures and/or policies:

_Nearest trauma center (see page 60) with preference for Level 1 or 2_____

_Consider air transport and Trauma Alert to hospital_____

_____

_____

_____

*Graphic obtained from clincalgate.com

ABDOMINAL INJURIES

Goals/Objectives:
- Assess and secure airway
- Recognition of secondary trauma and/or shock
- Recognition of transport necessity

Dispatch Information:
You are dispatched to a local bike path. Caller states he and his friends were riding their bikes when their 10-year-old friend crashed into a tree. They are trying to get the patient to the nearest roadway, but he is having a hard time walking because of the pain. The patient's parents are out of town and told the kids to call an ambulance.

Chief Complaint:
Trauma, Bicycle accident

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- Cool, spring day. 62 degrees F and sunny. Approximately 1530
- A group of young boys are waving at you as you enter the park area. All are visually shaken as you exit ambulance
- Patient is noted to be laying in the fetal position next to a mangled bicycle, damaged helmet is also lying next to bicycle
- One boy is speaking with the patient's parents on the phone

Initial Impression: Multisystem trauma patient. Patient looks to have removed most of his protective clothing/gear.

Vital Sign – Set 1
AVPU: Alert
B/P: 118/60
HR: 132, regular
Resp: 26, nonlabored
O_2 Sat: 97% (room air)
Pain: 8
GCS: 15 (4, 5, 6)
BGL:

Vital Sign – Set 2
AVPU: Alert
B/P: 116/80
HR: 140, regular
Resp: 26, nonlabored
O_2 Sat: 98% (O_2)
Pain: 8
GCS: 15 (4, 5, 6)
BGL: 92 mg/dl (if assessed)

Vital Sign – Set 3
AVPU: Alert
B/P: 120/80
HR: 134, regular
Resp: 24, nonlabored
O_2 Sat: 98% (O_2)
Pain: 8
GCS: 15 (4, 5, 6)
BGL:

Suggested Treatment:
O_2, Monitor, Pain Management, C-spine

Physical Exam

HEENT:
Head: No trauma noted, reports headache
Eyes: PERL
Ears: Unremarkable
Nose: Unremarkable
Oral Cavity: Unremarkable
Patient able to clear and control own airway

Chest:
Equal chest rise and fall noted
Lung sounds clear
No external trauma noted

Back:
Unremarkable

Abdomen/Pelvis:
Guarding noted in all quadrants
Circular mark noted in left upper quadrant
Pelvis stable

Extremity:
Small scrapes noted to upper extremities
PMS x 4

Other:
Skin: Pale, warm
No step off's or tenderness noted to neck

Patient has increased abdominal pain upon reassessment during transport

HPI: Group has been riding on the paths since around 1000. All have on protective gear including helmets

S/S: Abdominal pain, nausea, headache, blurred vision, dizzy

Allergies: Shell fish

Medications: None

PmHx: None

Last Meal: Lunch around noon

Events Prior: Patient was going fast to make a jump when his foot slipped, and he hit a tree with his front tire

Current on Immunizations? Yes

Patient Weight: 46kg

Notes:
Body Temp: 99.2 F

ECG: Sinus Tachycardia

Patient complains of increased nausea when he lays flat, wants to remain in fetal position

Patient comments multiple times that he is thirsty

Transport Consideration:
Securing patient properly on cot

ABDOMINAL INJURIES

Additional Things to Consider about the Scene:

- Is the incident described possible with injury patterns and/or evidence visualized on scene
- Are the handlebars bent on bicycle; damage to bike; damage to helmet
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Early and late signs of shock; internal blood loss
- Modesty of patient when removed clothing during assessment
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- Pediatric Trauma Society: Clinical Resources
    - http://pediatrictraumasociety.org/resources/clinical-resources.cgi

Blunt abdominal trauma is the third most common cause of pediatric trauma-related deaths. The spleen and liver are the most frequently injured organs, followed by the kidney, small bowel, and pancreas.

Things to consider based on your EMS protocols, procedures and/or policies:

_Nearest trauma center (see page 60) _____

_____

_____

_____

*Graphic 1 obtained from sciencedirect.com *Graphic 2 obtained from clincalgate.com

GUN SHOT WOUND

Goals/Objectives:
- Scene Safety
- Assess and secure airway
- Recognition of entrance and exit wounds, bleeding control
- Recognition of transport necessity

Dispatch Information:
You have been dispatched to a farm home. Caller advises that a 14-year-old male showed up saying he and his friends were dove hunting when he felt a 'punch' in his chest and immediately started having difficulty breathing. Patient has walked nearly ¼ mile to the farmer's home asking for help.

Chief Complaint:
Gun Shot Wound, Difficulty Breathing

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- September afternoon around 1300. Clear, sunny and 65 degrees F outside
- Arrive to home to find farmer and patient sitting out front. Farmer advises he has secured patient's gun
- Patient appears restless and immediately starts walking towards the ambulance

Initial Impression: Patient's shirt is unbuttoned, and a small hole noted below the sternum. A small amount of blood is oozing from the hole. Patient can speak in full sentences and then gasps for air.

Vital Sign – Set 1
AVPU: Alert
B/P: 130/70
HR: 142, regular
Resp: 24, slightly labored
O_2 Sat: 96% (room air)
Pain: 7
GCS: 15 (4, 5, 6)
BGL:

Vital Sign – Set 2
AVPU: Alert
B/P: 128/80
HR: 140, regular
Resp: 24, nonlabored
O_2 Sat: 98% (O_2) 95% (room air)
Pain: 7
GCS: 15 (4, 5, 6)
BGL: 102 mg/dl (if assessed)

Vital Sign – Set 3
AVPU: Alert
B/P: 130/76
HR: 136, regular
Resp: 24 nonlabored
O_2 Sat: 98% (O_2) 94% (room air)
Pain: 7
GCS: 15 (4, 5, 6)
BGL:

Suggested Treatment: O_2, Monitor, IV, Airway Management, Medications

Physical Exam

HEENT:
Head: Unremarkable
Eyes: PERL
Ears: Unremarkable
Nose: Unremarkable
Oral Cavity: Unremarkable
Patient able to clear and control own airway

Chest:
Equal chest rise and fall noted
Lung sounds clear
Wound noted just below sternum

Back:
Unremarkable

Abdomen/Pelvis:
No guarding noted upon quadrant palpation
No trauma noted
Pelvis stable

Extremity:
No trauma noted to legs or arms
PMS x 4

Other:
Skin: Pale, Warm, Moist

No step off's or tenderness noted to neck

Patient states all his pain is in his thoracic cavity (points to where the wound is located)

HPI:

S/S: Entrance wound noted about an inch below the sternum. No exit wound found during assessment. Short of air, difficulty speaking

Allergies: NKDA

Medications: None

PmHx: Asthma as a child

Last Meal: Breakfast around 0800

Events Prior: Dove hunting with small group. Patient is unaware of who or how he was shot

Current on Immunizations? Yes

Patient Weight: 46kg

Notes:
Body Temp: 99.0 F

ECG: Sinus Tachycardia

Patient calms during transport and once he finds a position of comfort, can breathe much easier. Nervous about friends getting in trouble

Transport Consideration:
Securing patient properly on cot

GUN SHOT WOUND

Additional Things to Consider about the Scene:

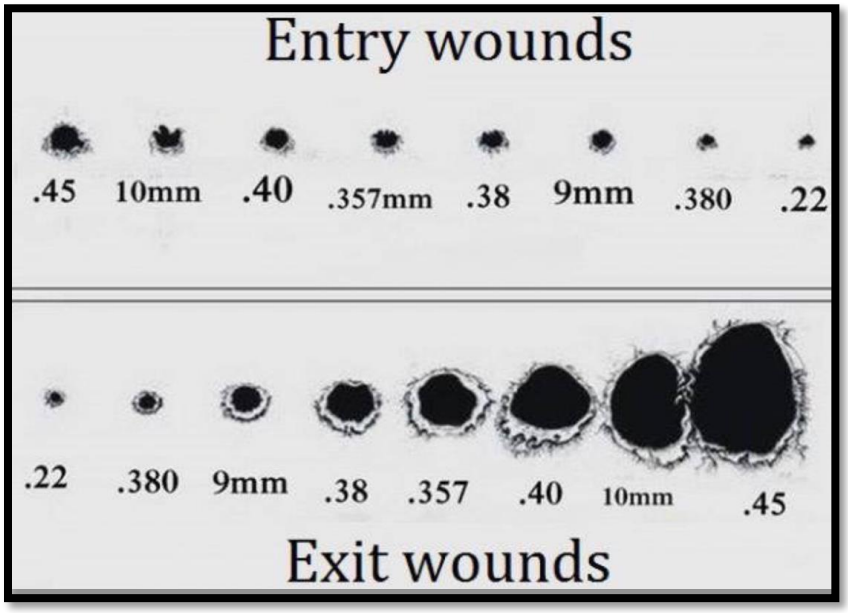
- Family centered care

Additional Things to Consider during Treatment/Transport:

- Modesty of patient while removing clothing during assessment/examination
- Pattern of injury based on; Nonpenetrating, Penetrating, Perforating, Avulsive
- Pattern of injury based on weapon used; handgun vs rifle vs shotgun
- Keeping clothing intact for local police agency in case of crime scene investigation needs
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- New Hampshire Fish and Game: Hunter Education
  - https://www.wildlife.state.nh.us/hunting/hunter-ed.html
- Stop the Bleed
  - https://www.bleedingcontrol.org/



Things to consider based on your EMS protocols, procedures and/or policies:

_Nearest trauma center (see page 60) with preference for Level 1 or 2_____

_Consider air transport, Trauma Alert to hospital_____

_Consider occlusive dressing for developing pneumothorax_____

_____

_____

*Graphic obtained from texasguntalk.com

HANGING

Goals/Objectives:
- Assess and secure airway
- Cervical spine precautions
- Recognition of hypoxic state
- Recognition of transport necessity

Dispatch Information:
Dispatch is sending you to an unknown medical call. Caller advised that she got into an argument with her 14-year-old son and now he will not answer the phone. She last spoke with him an hour ago. Patient has had increased stress and battled depression the last 3 years. Neighbors have been unable to contact the patient for the last 15 minutes.

Chief Complaint:
Suicide Attempt

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- Police on scene triaging code red. Police made access to the home and found patient hanging in garage
- Police advise that patient had thick rope around his neck that they cut off
- You note a small desk nearby and a knocked over chair that PD advises was that way when they entered

Initial Impression: Possible suicide attempt via hanging. Pill bottles are also present in the area prescribed to patient and all are empty. You recognize patient from a call a few weeks ago for a behavioral issue at the local middle school.

Vital Sign – Set 1
AVPU: Unresponsive
B/P: Unable to obtain
HR: 60, regular
Resp: 8, labored and shallow
O_2 Sat: 90% (room air)
Pain:
GCS: 3 (1, 1, 1)
BGL:

Vital Sign – Set 2
AVPU: Unresponsive
B/P: 72/50
HR: 56, regular
Resp: 8, labored and shallow
O_2 Sat: 94% (O_2)
Pain:
GCS: 3 (1, 1, 1)
BGL: 64 mg/dl (if assessed)

Vital Sign – Set 3
AVPU: Unresponsive
B/P: 70/50
HR: 54, regular
Resp: 8, labored and shallow
O_2 Sat: 94% (O_2)
Pain:
GCS: 3 (1, 1, 1)
BGL:

Suggested Treatment:
O_2, Monitor, IV, Medications, Airway Management, Suction

Physical Exam

HEENT:
Head: Unremarkable
Eyes: Bulging and sluggish
Ears: Unremarkable
Nose: Unremarkable
Oral Cavity: Tongue is swollen, jaw clamped
Patient is gasping for air

Chest:
Equal chest rise and fall noted, shallow
Lung sounds clear
No external trauma noted

Back:
No external trauma noted

Abdomen/Pelvis:
No trauma noted
Pelvis stable

Extremity:
No trauma noted to legs or arms
All extremities are flaccid

Other:
Skin: Cool, Pale, Dry
Marking around the neck line, red in color

Appears patient has vomited on self

HPI: Patient was recently expelled from school following another fight

S/S: Cyanosis to lips/face, pill bottles around patient's feet, markings to patient's neck, vomit on shirt

Allergies: Depakote

Medications: Prozac, Lexapro, Ativan

PmHx: Depression, suicide attempts; 2 last month

Last Meal: Unknown

Events Prior: Patient had a fight with his parents via telephone

Current on Immunizations? Unknown

Patient Weight: 48kg

Notes:
Body Temp:

ECG: Sinus Bradycardia

Patient makes no purposeful movements during transport. You are unable to 'unlock' jaw

Transport Consideration:
Securing patient properly on cot

HANGING

Additional Things to Consider about the Scene:

- Any note or messages left by patient
- Family centered care

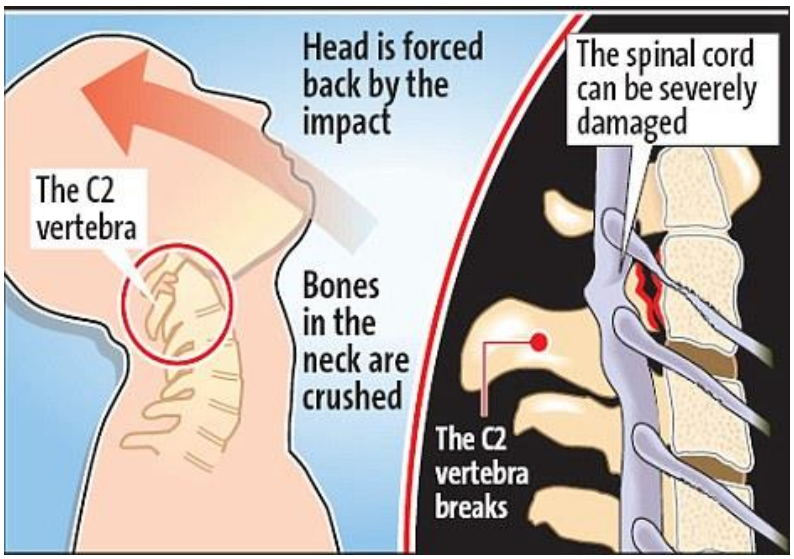
Additional Things to Consider during Treatment/Transport:

- Modesty of patient
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- Local treatment facility, Counseling Center and/or Mental Health Center
- American Academy of Pediatrics: Healthy Children
    - https://www.healthychildren.org/English/news/Pages/Youths-Treated-for-Nonsuicidal-Self-Harm-at-Increased-Risk-of-Suicide-Within-a-Year.aspx

*HANGMAN'S FRACTURE



Things to consider based on your EMS protocols, procedures and/or policies:

_Nearest trauma center (see page 60) _____

_____

_____

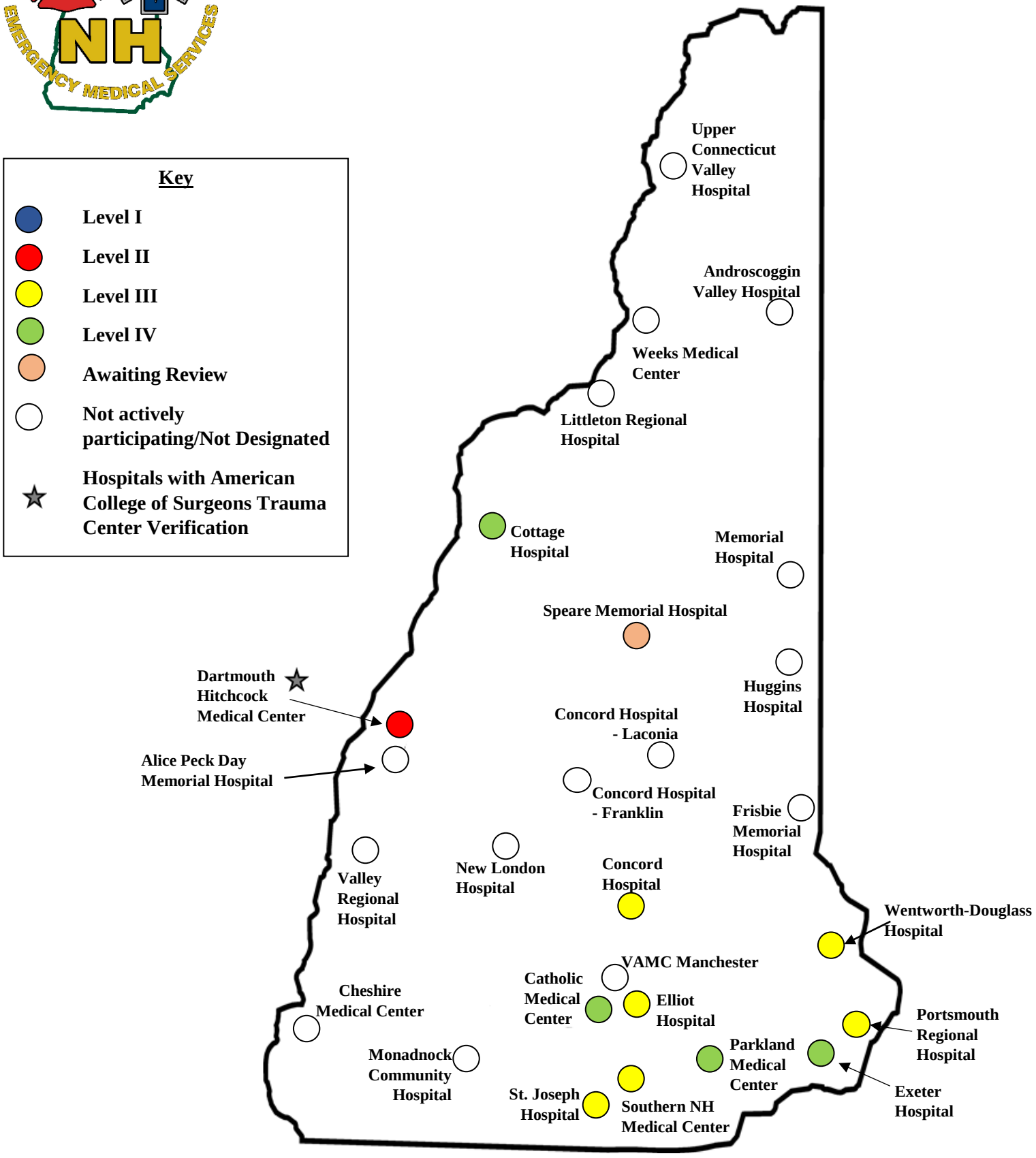
_____

*Graphic obtained from Daily Mail

New Hampshire Trauma System

Participating Hospitals - Pediatric

Most Recent Update: September 2021



COMMUNICATION SCENARIO

LANGUAGE BARRIER

Goals/Objectives:
- Communicating with patients of diverse cultures
- Communicating with patients that are non-verbal
- Communicating with patients that have special needs

Dispatch Information:
You are dispatched to a local apartment complex. Dispatch advises that they do not know what is going on as there is a language barrier. Crying is heard in the background and all the information you have is a 'child needs help.'

Chief Complaint:
Unknown call for EMS

Additional Resources Requested:
Police and Fire Department, ALS

Scene Description:
- Arrive at address and notice a gentleman waving at you from the porch
- PD has cleared the scene and advised there is a young male patient unresponsive on the floor
- Home is clean with multiple people gathered in the living room around the young child
- A woman approaches you and hands you an unopened bottle of Dilantin

Initial Impression: No one can give you any further information. You ask dispatch if there is a way to get in touch with a local translator. Male on scene keeps repeating 'hospital.'

Vital Sign – Set 1
AVPU: Unresponsive
B/P: 100/72
HR: 124, regular
Resp: 28, nonlabored
O_2 Sat: 96% (room air)
Pain:
GCS: 3 (1, 1, 1)
BGL:

Vital Sign – Set 2
AVPU: Painful
B/P: 102/80
HR: 120, regular
Resp: 26, nonlabored
O_2 Sat: 94% room air (98% if O_2 applied)
Pain:
GCS: 7 (1,2,4)
BGL: 84mg/dl (if assessed)

Vital Sign – Set 3
AVPU: Verbal, Inappropriate
B/P: 106/84
HR: 122, regular
Resp: 22, nonlabored
O_2 Sat: 98% on 02
Pain:
GCS: 10 (2, 3, 5)
BGL:

Physical Exam

HEENT:
Head: Unremarkable
Eyes: Sluggish
Ears: Unremarkable
Nose: Unremarkable
Oral Cavity: Blood noted. Tongue looks to have been bitten
Patient able to clear and control own airway

Chest:
Equal chest rise and fall noted
Lung sounds clear
No external trauma noted

Back:
No external trauma noted

Abdomen/Pelvis:
No guarding noted upon quadrant palpation
No trauma noted
Pelvis stable

Extremity:
No trauma noted to legs or arms

Other:
Skin: Pale, warm with tenting noted
No step off's or tenderness noted to neck

Pupils both return to PERL during transport

HPI:

S/S: Vomit noted on ground and dry blood noted around the lips

Allergies: Unknown

Medications: Unknown other than the prescribed Dilantin

PmHx: Unknown

Last Meal: Unknown

Events Prior: Unknown

Current on Immunizations?

Patient Weight: Estimate of 22kg

Notes:
Body Temp: 99.2F

ECG: Sinus Tachycardia

Patient begins to moan during transport. Patient remains sleepy during transport.

Suggested Treatment:
O_2, Monitor, IV access, Fluids for dehydration

Transport Consideration:
Securing patient properly on cot

LANGUAGE BARRIER

Additional Things to Consider about the Scene:

- Ask anyone, including younger children, if they can speak English
- Use any communication tool available to you to communicate with family
- Family centered care, as much as possible

Additional Things to Consider during Treatment/Transport:

- Ask for any doctor notes or hospital paperwork
- Demonstrate, as much as possible, what you will be doing prior to any intervention
- Make contact with the physician's office that is noted on prescription bottle
- Alert receiving facility early for the need of an interpreter
- Keep back of ambulance lighting/temperature appropriate for patient comfort, low stimulation
- Transport to the nearest appropriate facility

Additional Educational Resources to Consider:

- Kansas EMSC EMS Communication Cards (see pages 66-70)
- Cross-Cultural Communication for EMS
    - https://ambulance.org/2015/06/25/cross-cultural-communication-for-ems/
- Translation apps for smart devices
- Language Lines with 24-hour access

Things to consider based on your EMS protocols, procedures and/or policies:

_____

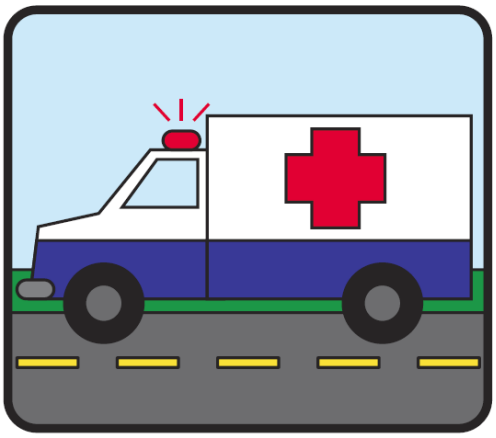
_____

_____

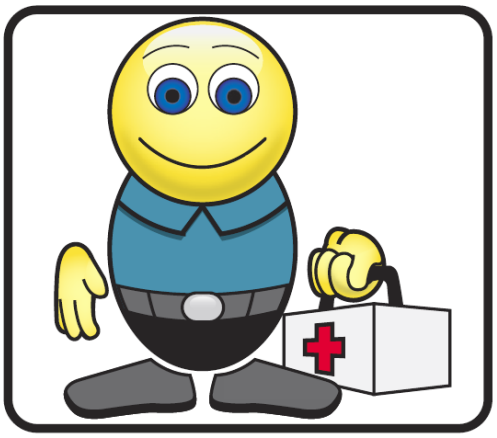
_____

COMMUNICATION CARDS

Ambulance



Paramedic



Happy

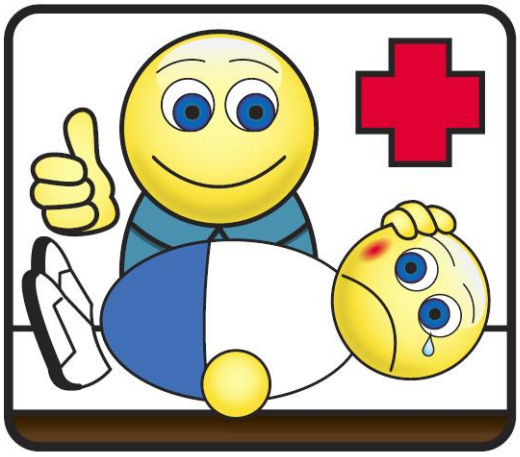
Sad

Yes

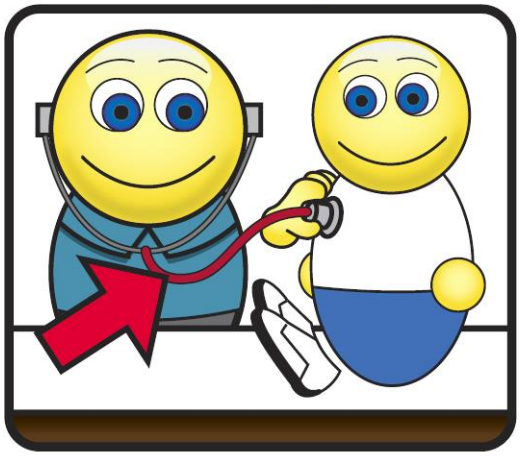
No

COMMUNICATION CARDS

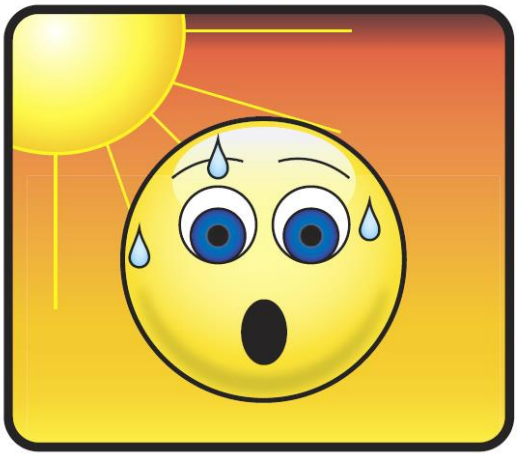
Examination



Stethoscope



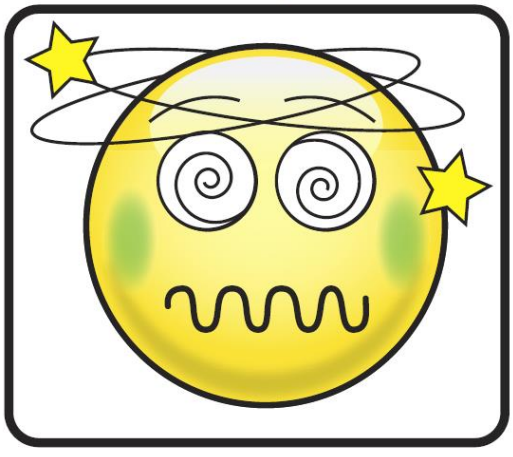
Hot



Cold

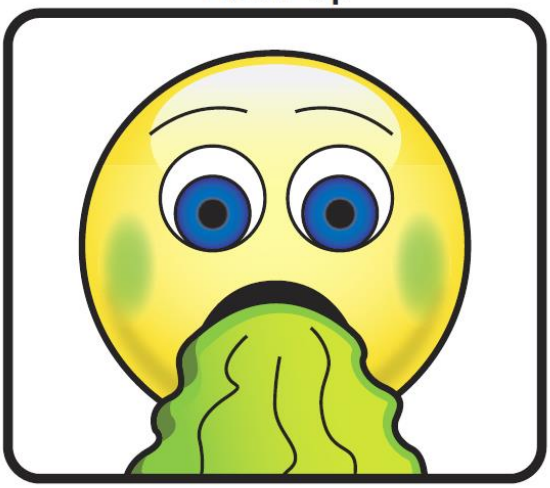
Sick

Dizzy



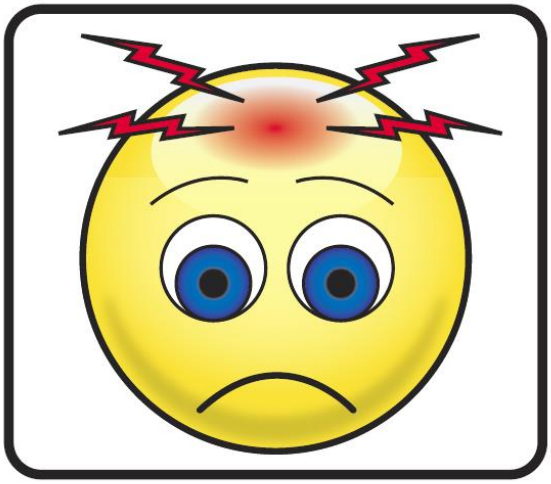
COMMUNICATION CARDS

Throw Up

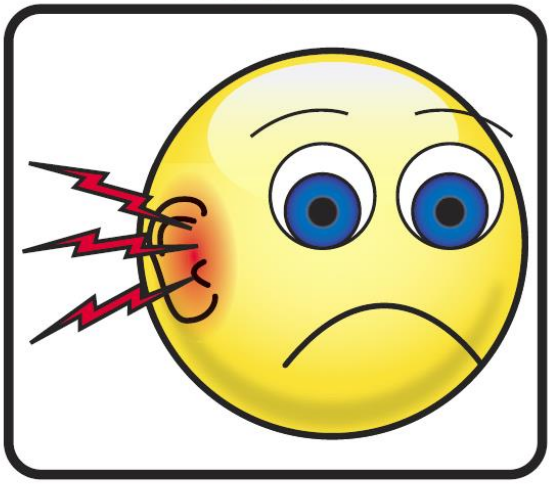


Diarrhea

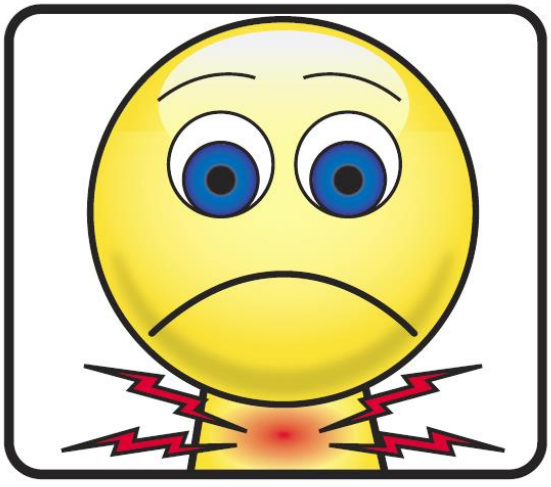
Head Hurts



Ear Hurts



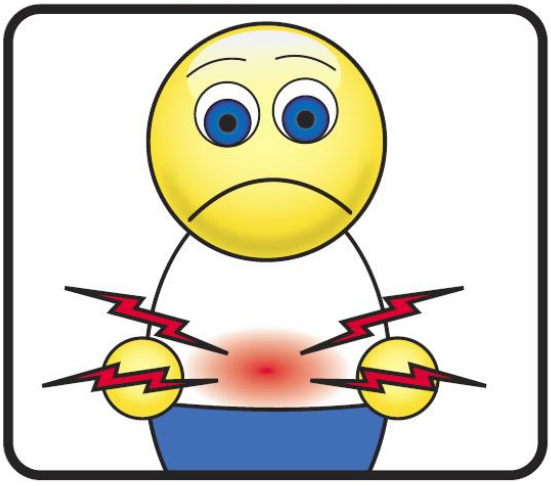
Throat Hurts



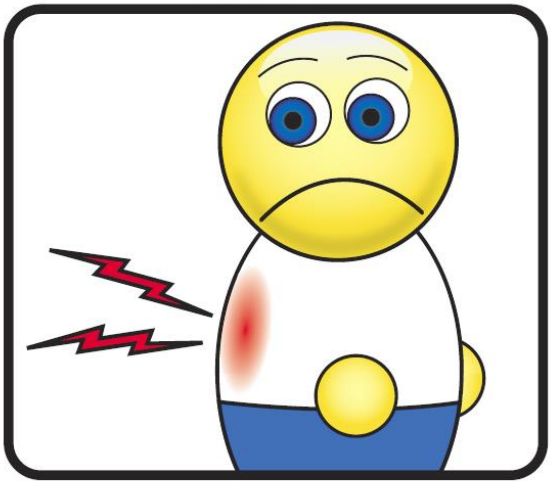
Cough

COMMUNICATION CARDS

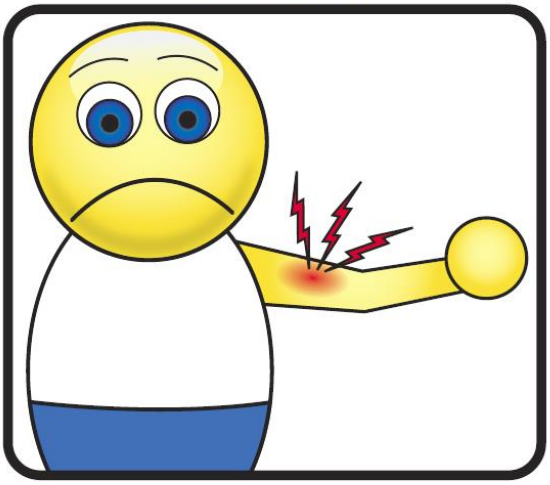
Stomach Hurts



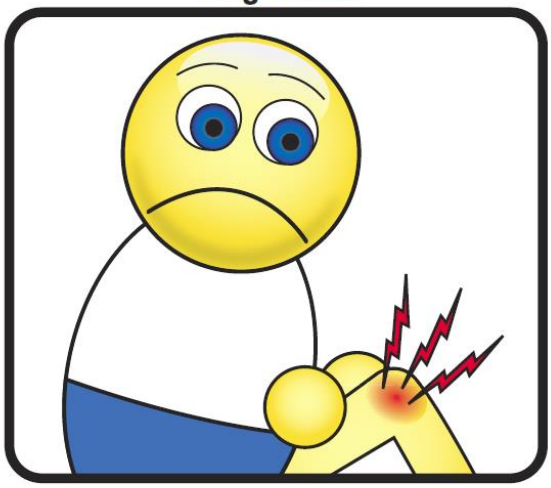
Back Hurts



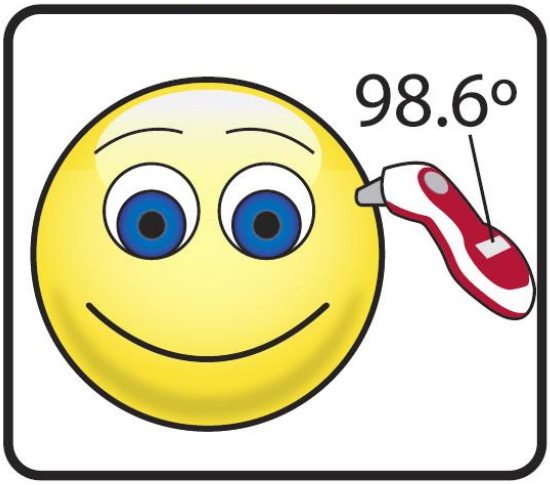
Arm Hurts



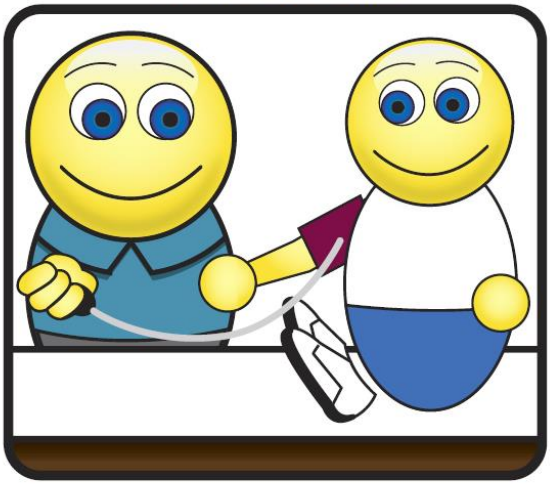
Leg Hurts



Thermometer

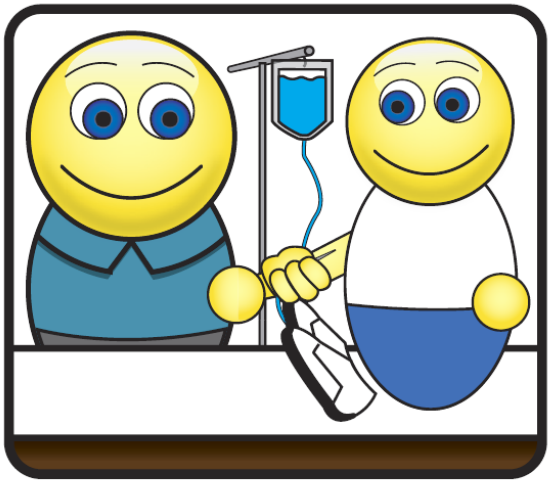


Blood Pressure

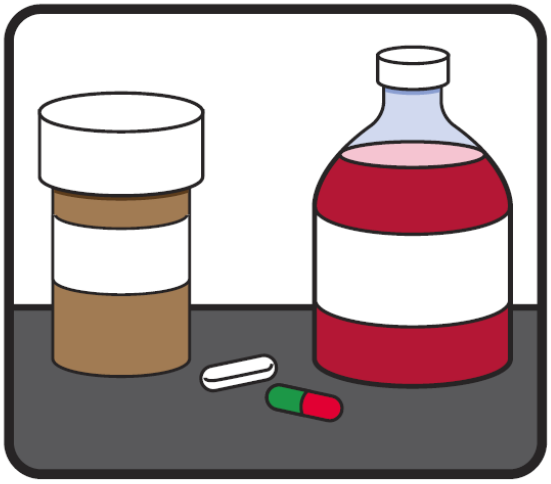


COMMUNICATION CARDS

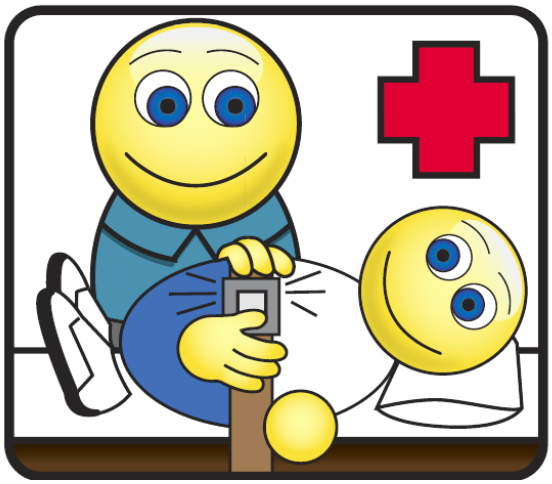
IV Fluid



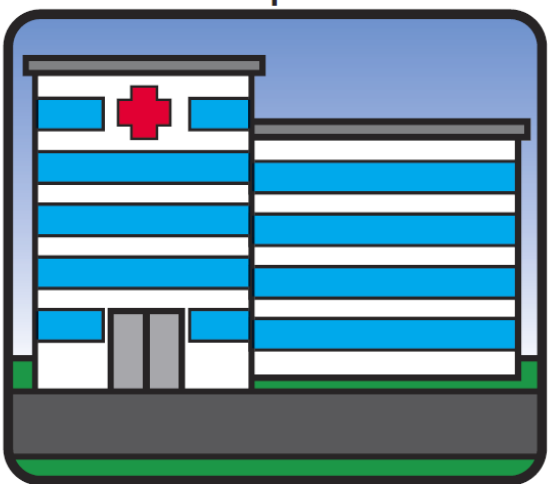
Medicine



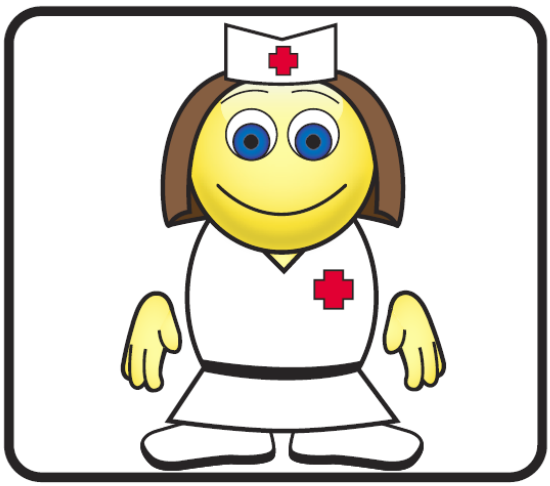
Cot



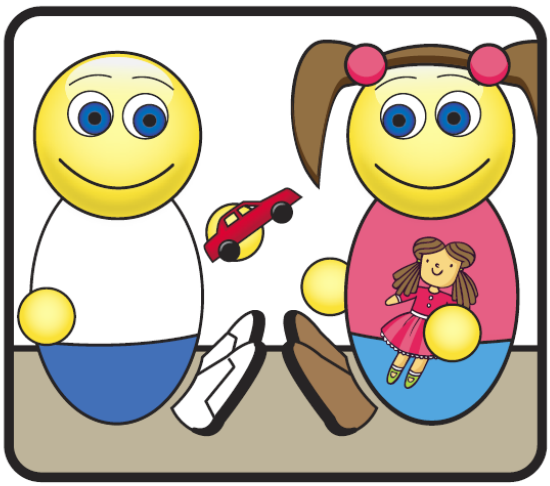
Hospital



Nurse



All Better



PEDIATRIC SAFE TRANSPORT

Safe Transport of Children by EMS: Interim Guidance

March 8, 2017

Establishing guidelines for safely transporting children in ambulances has been an endeavor undertaken by various individuals and organizations in recent years. Despite these efforts, this multi-faceted problem has not been easy to solve. While there have been resources developed, such as the *Working Group Best-Practice Recommendations for the Safe Transportation of Children in Emergency Ground Ambulances* (NHTSA 2012), there remain unanswered questions, primarily due to the lack of ambulance crash testing research specific to children.

The National Association of EMS State Officials (NASEMSO) is committed to advocating for the creation of evidence-based standards for safely transporting children by ambulance. Such standards would ensure a safer environment for the patients who rely on the EMS provider to act on their behalf. Developing standards will require large investments of both time and funding to conduct the required crash testing. If research were started today, it would require at least three years and hundreds of thousands of dollars to complete.

While NASEMSO collaborates with other organizations to bring these standards to reality, it recognizes the gap between that goal and the reality of the decisions that EMS providers face today will continue to be an issue of concern. The purpose of this interim guidance is to reduce that gap as much and as soon as possible, until evidence can be collected, analyzed, and used to develop standards specifically for children. Ultimately, pediatric restraint devices should be tested by the manufacturer to meet a new, yet-to-be developed standard.

NASEMSO recommends that this new standard include a pass/fail injury criteria comparable to that identified in FMVSS-213, which applies to child restraints in passenger vehicles. All testing should use the ambulance-specific crash pulses described in SAE J3044, SAE J2956, and SAE J2917 respectively. Liners used in testing should meet the SAE J3027 Integrity, Retention and Patient Restraint Specifications. Manufacturers should indicate to prospective purchasers whether their device(s) have met these requirements for the weight range indicated for the device.

It is the position of NASEMSO that:

1) Evidence-based standards for safely transporting children in ambulances should be developed and published by nationally recognized standards development organizations, such as the Society for Automotive Engineers (SAE);
2) Safe ambulance transport should be considered as a standard of care for the EMS system equivalent to maintaining an open airway, adequate ventilation and the maintenance of cardiovascular circulation; and
3) There are immediate actions that can be taken to improve pediatric safety in ambulances including, but not limited to:
   a. All EMS agencies that transport children should develop specific policies and procedures that address, at minimum the following elements:
      i. Methods, training (initial and continual), and equipment to secure children during transport in a way that reduces both forward motion and possible

** Devices shown in this section are ***not*** being endorsed and are only used for visual/training purposes. Please follow current NH EMS transport policies and guidelines. **

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2) Safe ambulance transport should be considered as a standard of care for the EMS system equivalent to maintaining an open airway, adequate ventilation and the maintenance of cardiovascular circulation; and
3) There are immediate actions that can be taken to improve pediatric safety in ambulances including, but not limited to:
    a. All EMS agencies that transport children should develop specific policies and procedures that address, at minimum the following elements:
        i. Methods, training (initial and continual), and equipment to secure children during transport in a way that reduces both forward motion and possible ejection. The primary focus should be to secure the torso, and provide support for the head, neck, and spine of the child, as indicated by the patient's condition;1

ii. Considerations for the varied situations that a child who needs transport to a hospital or other point of care may present to the EMS professional. These include, but may not be limited to a child who is:
    - uninjured/not ill,
    - ill/injured, but requiring no intensive interventions or monitoring,
    - requiring intensive interventions or monitoring,
    - requiring spinal immobilization or supine transport, and
    - multiple patients;2
iii. Prohibits children from being transported unrestrained, e.g. held in arms or lap;3
iv. Provision for securing all equipment during a transport where a child is an occupant of the vehicle, with mounting systems tested in accordance with the requirements of SAE J3043;
v. Only use child restraint devices in the position for which they are designed and tested; and

b. EMS agencies should have appropriately-sized child restraint system(s) readily available on all ambulances that may transport children. Additionally, personnel should be initially and recurrently evaluated and trained on the correct use of those restraint systems;
    i. The device(s) should cover, at minimum, a weight range of between five (5) and 99 pounds (2.3 - 45 kg), ideally supporting the safest transport possible for all persons of any age or size;
    ii. Only the manufacturer's recommendations for the weight/size of the patient should be considered when selecting the appropriate device for the specific child being transported; and
c. State EMS officials should act to put interim steps in place while evidence-based standards are developed and implemented, including, but not limited to:
    i. Encourage and support EMS transport agencies to implement cost effective solutions to mitigate risk while transporting children in ambulances; and
    ii. Work with other state EMS officials to create uniform approaches and policy language, including, but not limited to a network of information relating to ambulance crash-related injuries; and

4) NASEMSO does not recommend or endorse any particular product.

1Working Group Best-Practice Recommendations for the Safe Transport of Children in Emergency Ground Ambulances, page 12.
2 Ibid, pages 12-15.
3 The Do's and Don'ts of Transporting Children in an Ambulance (December 1999).

PATIENT TRANSPORT

NH RSA 265:107-a requires all children be properly restrained when riding in a vehicle. Any child who fits on a length-based resuscitation tape must be properly restrained in a safety seat or harness.
An ill or injured child must be restrained in a manner that minimizes injury in an ambulance crash. The best location for transporting a pediatric patient is secured directly to the ambulance cot. It is not acceptable, under any circumstance, to transport a pediatric patient in the arms of an adult.
It is recommended that agencies develop standard operating procedure/policy for pediatric transport that reflects their ambulance configurations and specific pediatric transport equipment/ devices.

TYPES OF RESTRAINTS:

1. Convertible car seat with two belt paths (front and back) with four points for belt attachment to the cot is considered best practice for pediatric patients who can tolerate a semi-upright position.
   - Position safety seat on cot facing foot-end with backrest elevated to meet back of child safety seat.
   - Secure safety seat with 2 pairs of belts at both forward and rear points of seat.
   - Place shoulder straps of the harness through slots just below child's shoulders and fasten snugly to child.
   - Follow manufacturer's guidelines regarding child's weight.

   Note: Non-convertible safety seats cannot be secured safely to cot. If child's personal safety seat is not a convertible seat, it cannot be used on the cot.

2. Stretcher harness device with 5 point harness

   Restraint device (marketed to EMS) with 5-point harness (examples: Ferno Pedi-Mate, SafeGuard Transport, ACR)
   - Attach securely to cot utilizing upper back strap behind cot and lower straps around cot's frame.
   - 5-point harness must rest snugly against child. Secure belt at child's shoulder level so no gaps exists above shoulders.
   - Adjust head portion of cot according to manufacturer's recommendation.
   - Pedi-mate fits children weighing 10 – 40 lbs. SafeGuard Transport fits children weighing 22 – 100 lbs.

   Follow manufacturer's guidelines regarding weight.

Policy Continues

Policy Continued

3. Car bed with both a front and rear belt path (example: Cosco Dream Ride SE)
- For infants who cannot tolerate a semi-upright position or who must lie flat.
- Position car bed so infant lies perpendicular to cot, keeping infant's head toward center of patient compartment.
- Fully raise backrest and anchor car bed to cot with 2 belts, utilizing the 4 attachment sites supplied with car bed.
- Only appropriate for infants from 5 – 20 lbs.

4. Isolette/Incubator must be secured to ambulance according to manufacturer's guidelines.
- Secure infant using manufacturer's restraint. (Five point harness restraint is preferred.)
- Blankets or towels may be used for additional stabilization

MOTHER AND NEWBORN TRANSPORT
- It is not acceptable, under any circumstance to transport a pediatric patient in the arms of an adult.
- Secure and transport mother on the cot.
  - If mother and newborn are both stable and a commercial device is available to fasten newborn to mom (examples: Aegis, Kangoofix) follow manufacturer's guidelines.
  - If mother and/or newborn are not stable or commercial device is not available, best practice is to request two ambulances; transporting each in their own ambulance.
  - If a second ambulance is not available, transport stable newborn secured to the rear-facing provider seat /captain's chair using a size-appropriate child restraint system, infant should be facing the rear of the ambulance. Either a convertible safety seat with a forward-facing belt path or an integrated child restraint system certified by the manufacturer to meet FMVSS No. 213 may be used to secure infant.
  - Do **NOT** use a rear-facing only safety seat in the rear-facing provider seat / captain's chair as this is dangerous and may lead to significant injuries.
  - Special attention should be paid to the high risk of hypothermia in newborns

NON-PATIENT TRANSPORT

Best practice is to transport well children in a vehicle other than the ambulance, whenever possible, for safety.

If no other vehicle is available and circumstances dictate that the ambulance must transport a well child, he/she may be transported in the following locations:
- Passenger seat of the driver's compartment if child is large enough (according to manufacturer's guidelines) to ride forward-facing in a child safety seat or booster seat. Airbag should be turned off. If the air bag can be deactivated, an infant, restrained in a rear-facing infant seat, may be placed in the passenger seat of the driver's compartment.
- Captain's chair in patient compartment using a size appropriate integrated seat or a convertible safety seat.

USE OF PATIENT'S CHILD SAFETY SEAT AFTER INVOLVEMENT IN MOTOR VEHICLE CRASH

The patient's safety seat may be used to transport child to hospital after involvement in a minor crash if ALL of the following apply:
- It is a convertible seat with both front and rear belt paths.
- Visual inspection, including under movable seat padding, does not reveal cracks or deformation.
- Vehicle in which safety seat was installed was capable of being driven from the scene of the crash.
- Vehicle door nearest the child safety seat was undamaged.
- The air bags (if any) did not deploy.

ACKNOWLEDGEMENTS

This resource was created and collated by the following individuals and programs. Their dedication to improving pediatric readiness and emergency care is appreciated and their passion unmeasurable.

Kansas and New Mexico EMSC Programs

Maia Rutman, MD
Director, DHMC Pediatric Emergency Services
Program Director, NH EMSC

Laurie Warnock, EMT-B, MPH
EMS Educator

Anna Sessa, MA, NRP
Program Manager, NH EMSC

Eric Jaeger, Paramedic
EMS Educator

All NH EMS Providers

References, More Information

NH EMS for Children: www.NHpediatricEMS.org

NH Trauma System: https://www.nh.gov/safety/divisions/fstems/ems/trauma/index.html

NASEMSO Safe Transport of Children Committee: https://nasemso.org/committees/safe-transport-of-children/

HRSA Maternal and Child Health Bureau: https://mchb.hrsa.gov/

EMSC Innovation and Improvement Center: https://emscimprovement.center/

EMSC Data Center: https://nedarc.org/

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