Three types of exam techniques:

1. START triage for MCI - Rapid assessment to categorize patients.

2. Rapid trauma assessment - Look them over before “packaging” the patient.


S-A-M-P-L-E HISTORY

S = presenting Sign or Symptom (Chief complaint)

“Why did you call us?”

“What is the problem?”

What do we observe to be wrong with the patient.

OPQRST of chief complaint

• = ONSET/ORIGIN

When?
What were you doing?

Ever happened before?

Was it sudden or gradual?

- **P = PROVOCATION / PALLATIVE**
  
  What makes it better?
  
  What makes it worse?
  
  Do meds help?

- **Q = QUALITY**
  
  Sharp, dull, burning, pressure?

- **R = REGION/RADIATION**
  
  Where is the problem?
  
  Does it radiate?

- **S = SEVERITY**
  
  On a scale of 1 – 10 with 10 being the worst ...?
• T = TIMING

   How long has it been going on?

   Is there a pattern to it?

   How long did it last?

• A = Allergies

Food

Environmental

Medications

• M = Medications

Prescriptions

Herbals

OTCs

When were they taken last?
Did they have any effect?

- **P** = Pertinent past medical history

General physical health

General mental and emotional health

Surgeries

Recent trauma anywhere or history of injury to the area of complaint?

Any family history of this or other medical problem?

- **L** = last oral intake, last normal menstrual period, last bowel movement

What and when did you last eat?

When was your last normal menstrual period?

Are you on birth control or hormone therapy?

When was your last bowel movement?

Was it normal?

- **E** = Event prior to emergency
What were you doing before this happened?

What are the observations of bystanders and family?

PHYSICAL EXAM

________________________________________________________________________

SCENE SIZE-UP

Scene safety and BSI “The scene is never the SAME!”

• S = safety

What do I see?

Hazards?

• Chemicals

• Equipment or vehicles

• Animals

• People
- Weapons

- Electricity or gas

  Risks?

- Blood

- Gas

- Fire

  Obstacles with entering or leaving?

  §   Stairs

  §   Fences

  §   Narrow openings, hallways, balconies

  - A = Additional victims

- How many victims are there?

- Do I need more help?

  - M = Mechanism of injury or illness
§ Windshield fractures

§ Crumple zones

§ Rollovers

§ 12 inches or more of lateral intrusion

§ Airbag deployment

§ How high?

§ How far?

§ How fast?

§ How did they land?

§ What did they hit?

- E = Extrication or special equipment needed

- Call for additional resources

- Call for aeromedical support
INITIAL ASSESSMENT (ALL PATIENTS)

The initial assessment (formerly called the Primary Survey) is designed to find life-threatening emergencies requiring swift interventions. It should take less than a minute to complete. The components are: General Impression, ABCs. LOC, and C-spine.

1. General Survey

§ Does the patient appear to be awake or alert?

§ Do the patient look sick or injured?

§ What is the level of distress?

   Labored breathing

   Wheezing or coughing

   Wincing or writhing in pain

   Guarding or holding a body area

   Anxiety or obvious altered mental status

   Are there obvious trauma or medical clues as to what’s wrong?
Physical characteristics of the patient

Age

Sex (and sexual development)

Weight (appropriate for age and height)

Race

2. Level of Consciousness with C-Spine control if indicated

A = alert

Person

Place

Time

Event

V = Responsive to verbal stimulus

P = Responsive to painful stimulus
U = Unresponsive

3. Airway

Is it patent?

CRITICAL INTERVENTIONS:

Basic maneuvers

advanced procedures if basics fail

immediate transport if airway can’t be secured

4. Breathing

Are they breathing?

Rate: Are they breathing too fast or too slow (less than 8 or greater than 24)?

Quality: Are they breathing deep enough?

Rhythm: Are they breathing irregularly?

Open wound or flail segment?

CRITICAL INTERVENTIONS:
Provide oxygen or positive pressure breathing if indicated

Stabilize flail segments

Cover sucking chest wounds

5. Circulation

Do they have a carotid pulse?

Do they have a radial pulse?

Rate: Is it too fast or too slow?

Quality: Is it strong or weak?

Rhythm: Is it irregular

Do they have any major bleeding that needs immediate control?

Skin color, temp, cap. refill

CRITICAL INTERVENTIONS:

Perform CPR

Treat for shock
Control major bleeding
Determine transport priority

Poor general impression

Altered LOC

Shock

Difficulty breathing

Difficult airway

Uncontrollable bleeding

Chest pain

Multi-trauma

FOCUSED PHYSICAL EXAM

The nature of the focused physical exam depends on the patient’s condition and the history. Some may require a complete head-to-toe exam while others may only need the specific body area examined based on their chief complaint. There are five types of patients the paramedic may encounter requiring two assessment variations:
1. Major trauma or significant mechanism of injury (head-to-toe exam)

2. Minor isolated trauma (history-based exam)

3. Responsive, alert medical patient (history-based exam)

4. Medical patient with altered LOC (head-to-toe exam)

5. Unconscious patient of unknown cause (head-to-toe)

The head-to-toe exam is essentially the same regardless of whether it is medical or trauma. Most elements of the trauma assessment can be applied to medical patients.

RAPID TRAUMA ASSESSMENT (HEAD-TO-TOE EXAM)

All areas will be checked for DCAP-BTLS.

D = deformities

C = contusions

A = abrasions

P = penetrations, punctures, paradoxical movement

B = burns
T = tenderness
L = lacerations
S = swelling

HEAD:

DCAP-BTLS
Fluid in ears
Fluid in nose
Blood, teeth, or trauma to mouth
Pupil response
Size, equality, reactivity, accommodation (PERLA)

CRITICAL INTERVENTIONS:

Recognize increase ICP and treat
Maintain airway
NECK:

DCAP-BTLS

JVD

Tracheal deviation

Subcutaneous emphysema

Stridor

CRITICAL INTERVENTIONS:

cover neck wounds with occlusive dressing

Apply C-collar

CHEST:

DCAP-BTLS

Paradoxical movement

Subcutaneous emphysema

Breath sounds (4 areas)
CRITICAL INTERVENTIONS:

Stabilize flail segment

Cover sucking chest wounds

Decompress tension pneumothorax

ABDOMEN:

DCAP-BTLS

Distention

Guarding or rigidity

Cullen’s sign – bruising around umbilicus indicative of internal bleeding

Turner’s sign – bruising around the flank indicative of kidney or spleen damage

Murphy’s sign – tenderness upon palpation in the RUQ indicative of gall bladder disease

McBurney’s Point – tenderness upon palpation in the RLQ indicative of appendicitis
CRITICAL INTERVENTIONS:

Recognize shock and intervene appropriately

PELVIS:

DCAP-BTLS

Incontinence

Priapism

Bleeding from rectum or genitals

CRITICAL INTERVENTIONS:

Recognize possibility of shock and treat

LOWER EXTREMITIES:

DCAP-BTLS

Pulse, Motor, Sensory

CRITICAL INTERVENTIONS:

Major bleeding controlled during initial assessment.
Lack of pulses may require manual manipulation to restore circulation.

UPPER EXTREMITIES:

DCAP-BTLS

Pulse, Motor, Sensory

CRITICAL INTERVENTIONS:

Major bleeding controlled during initial assessment.

Lack of pulses may require manual manipulation to restore circulation.

BACK AND BUTTOCKS:

DCAP-BTLS

Rectal bleeding

Rectal incontinence

VITAL SIGNS:

Pulse (rate, rhythm, quality)
Respirations (rate, rhythm, quality)

Blood pressure

Temperature (if indicated)

D-stick (if indicated)

Pulse oximetry (if indicated)

Cardiac monitor (if indicated)

TRANSPORT

If patient is stable, proceed to detailed physical exam. If patient needs immediate transport, skip to radio report.

Detailed and ongoing assessments may be done enroute.

DETAILED PHYSICAL EXAM

1. Repeat initial assessment

2. Concentrate on areas of concern found in focused exam or history
3. Evaluate systems of concern:

Cardiovascular

   Heart sounds

ECG

Pulse

Blood pressure

Pulmonary

   Pulse oximeter

   End-tidal CO2

   Breath sounds

   Peak Flow Rate

Nervous

   Pupils

   Cranial nerve evaluation
Dermatome evaluation

Reflexes

Blood glucose

Coma cocktail

Musculoskeletal

Muscle strength

Integumentary

Skin

Hair

Nails

Gastrointestinal

Bowel sounds

Occult blood
Reproductive

Male external genitalia

Vaginal discharge

RADIO REPORT

EMS ID

Age

Weight

Race (if applicable)

Sex

Chief complaint or mechanism of injury

Assessment findings

Interventions and response

Vital signs
ASSESSMENT

DEFINITIONS

- General Impression - EMT develops a plan of action from the time the call is received until the first few minutes of arrival.
- Scene Size Up - Immediately upon arrival look for MOI/IOS, Safety, Number of Patients, Help Needed.
- Initial (Primary) Assessment - AVPU, CC, ABCDE. Used to find life threatening situations and treat them immediately when found.
- General (Secondary) Assessment - SAMPLE, Vitals, and Physical Assessment
• Ongoing Assessment - Start over at AVPU. Every 5 minutes for unstable, every 15 minutes for stable.

• Report - Give ID, Age, Sex, CC, ........, Care Given, ETA.

• Chief Complaint (CC) - Why the person called 911. In their words is the CC.

• Nature of Illness - is another term for CC.

• LOC stand for Level of Consciousness not Loss of Consciousness.

• BSI stands for Body Substance Isolation. All bodily fluids are contaminated.

• Paradoxical motion is when 3 or more consecutive ribs are broken in two or more places making the broken area move in an opposite direction as the rest.

• Crepitus are bone ends grinding as they rug against each other during CPR for example. Or air trapped under the skin and makes a popping sound.

• Edema means swelling.

BASE LINE VITALS

• Pulse, BP, Respirations, Temperature

• Baseline vitals are the first ones taken.

• Trending is the comparison of other sets of vitals taken compared to the baseline.

RESPIRATIONS

• Ventilation is the act of the chest moving.

• Respirations are the act of getting air into the body and to tissue and out.

• Adult rate is 12 to 20 in a minute, Child is 15-30 and Infant is 25 to 50.

• Count the number of times a person takes a breath in a minutes for 30 seconds. Then double the number for breaths per minute. Number should always be even unless a machine has done it for you.

• Describe the ventilations - noisy, quiet, deep, shallow, normal, effortless.
• Describe the rhythms - regular or irregular.

Breathing Sounds

• Snoring - tongue has fallen back and is blocking the airway.
• Gurgling - fluid in the upper airway.
• Wheezing - reversible narrowing of the lower airway.
• Stridor - Partial upper airway obstruction. High pitched sound heard on inhalation.
• Rales - fine crackling bubbles in the alveoli.
• Rhonchi - fluid in the bronchioles.
• Wet Lung - Pulmonary edema.
• Note - Crackling lung sounds are not accurate. Not a true breath sound description word.

Perfusion (Pulse)

• Pulse is the contraction of the left ventricular.
• Count the number of pulses felt in 30 seconds and multiply by two for beats per minute.
• Even number unless a machine has told you.
• Pulse point is when the artery comes close to the surface and can be pressed against a bone.
• Carotid pulse is checked in unresponsive adults and children.
• Radial pulse is checked in responsive adults and children.
• Infants use the brachial
• Central pulses are; carotid, femoral and apical.
• Apical pulse is listening to the heart pump.
• Describe the rhythms - regular or irregular.
• Describe the pulse - strong, weak, thready, absent, bounding.
• Normal pulse range for adult 60 to 100 per minute.
At this time just know that child and infant hearts rates are faster.

**Capillary Refill**

- Should return in less than 2 seconds.
- Most reliable in patients under 6 years of age.
- If under 3 years old a BP can be replaced with Cap Refill.
- If between 3 and 6 years old try for BP and if cannot get use Cap Refill.
- Used on adults but not as accurate.
- Cold and warm environments, raising or lowering the body part tested can falsify the test.

**Blood Pressure**

- Auscultation (listen) and Palpation (feel).
- Systolic is heart at work or pressure in vessels. 90 to 140mmHg.
- Diastolic is heart at rest or neutral pressure in vessels. 60 to 90mmHg.
- Palpation is good in noisy environments and to find baseline for auscultation.
- Palpation can only find systolic number not diastolic.
- Auscultation can find both systolic and diastolic numbers and is more accurate.
- BP cuff should be 2/3 of the upper arm.
- Located 1 inch above the fold in the elbow.
- To Palpate; Find radial pulse and pump up until gone. Go about 30 more and slowly less air out until pulse returns. You are done. The number you get is #/Palp.
- To Auscultation; Take palpated number and add about 30 to it. Slowly let air out of cuff and listen for first sound and last sound. Then you are done. The first sound is systolic and the last sound is diastolic.
- Each line on the BP gauge is 2 points. Release air at a rate of 2 to 3 lines a second.

**Temperature**
• 96.4 to 99.6 is normal range

• Can take oral, axillary, rectal, tympanic, or touch.

• If touch use back of hand on core - (chest/abdomen). Is it hot, cool, cold, warm. Is it dry, wet, cool/clammy. Is the color pink, blue, gray, pale. In deep pigmented individuals is inside of eye, mouth.

• The red probe goes in the "red eye".

• The blue probe goes in the mouth or other.

Level of Consciousness (LOC)

• AVPU is used.

• Alert, verbal, pain, unresponsive.

• Only one letter can be used.

• Unresponsive and coma mean the same.

SAMPLE History

• SAMPLE is used to ask questions and interview the patient.

• Sign and symptoms, allergies, medication, pertinent past, last intake, events.

OPQRST

• Better defines the "s" in SAMPLE.

• Onset, provocation, quality, radiation, severity, time.

DCAPBTLS

• Used to remember what we are looking for when touching a person during an assessment.

• Deformities, contusions, abrasions, punctures, burns, tenderness, lacerations, swelling.

Detail Assessment
• Is done in the general assessment.

• It is a head to toe assessment.

• Do this in major injuries, young patients, unresponsive, intoxicated, under the influence patients. Also people who do not give a specific CC.

• Start at head, then - throat, chest, abdomen, pelvis, legs, arms, and back.

• Should take less than 90 seconds to complete.

• Note do not compress the pelvis if unstable.

Sign and Symptom

• Sign is something you see, feel or touch and can validate.

• Symptom is something the patient describes.

PUPILS

• Dilated, fixed, unequal, sluggish are common words to describe.

• Unequal are always stroke in this course.

• PEARL means pupils equal and reactive to light. This is normal.

• Pupils should dilate in dark and constrict in light.

• When flashing a light in one eye you should be testing the other eye.