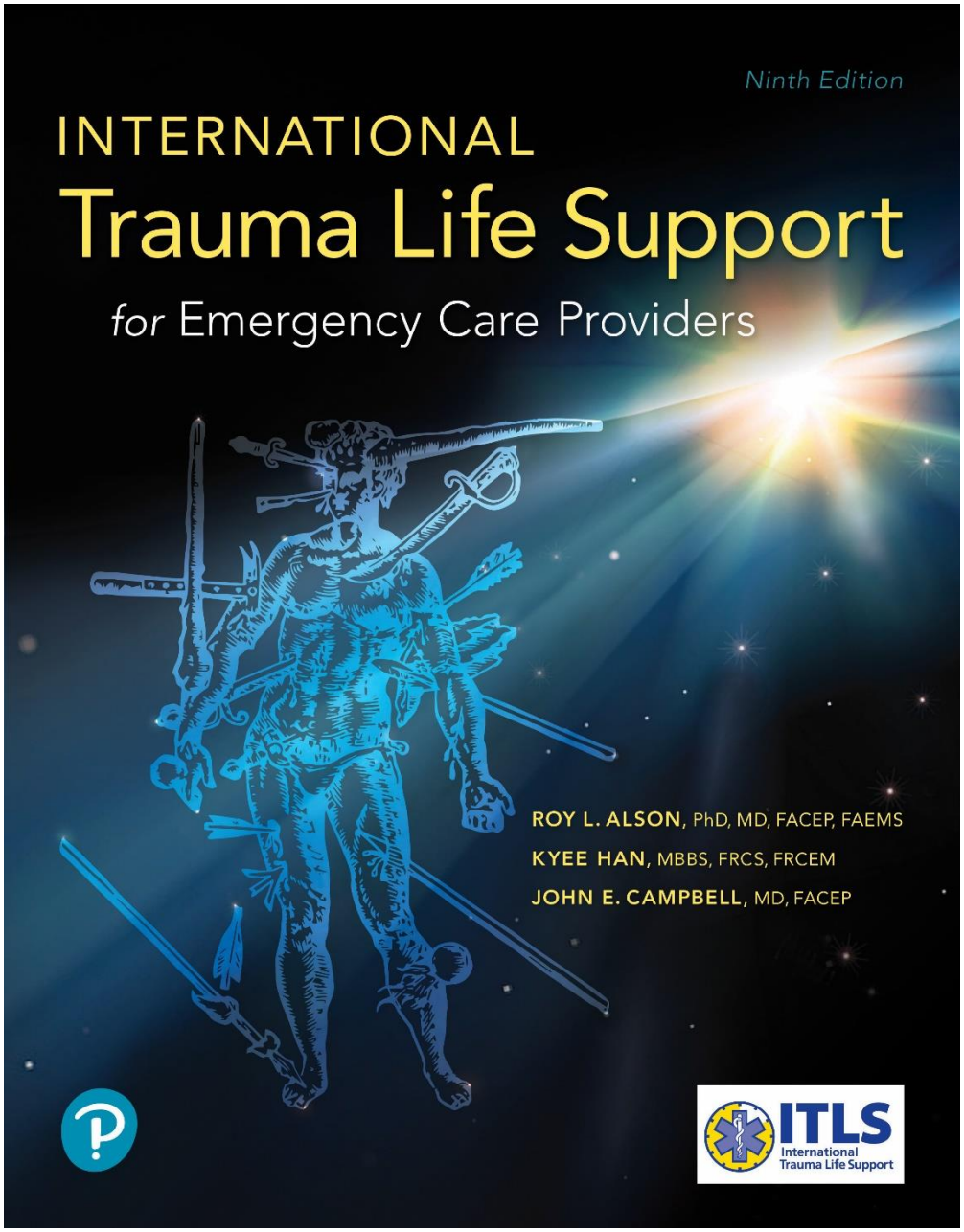
Traditional Provider Course Testing Scenarios

International Trauma Life Support for Emergency Care Providers

9th Edition



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9th Edition Traditional Provider Course
Testing Scenarios

SCENARIO 1

Setting

EMS/Prehospital: You have been called to the scene of a domestic violence incident. A female has injuries incompatible with life. A male has also been shot and the police lead you over to him.

Occupational Health/Industrial: You have been called to the scene of the company president's administrative offices for a shooting incident. According to security, it is the president of the company and her husband who have been shot. The president has injuries incompatible with life. Security directs you to the president's husband.

Military: You are a dismounted medic and have been called to the scene of a shooting incident at a village elder's home. According to the QRF (Quick Reaction Force), the two patients are the the village chief and his wife. The chief's wife has injuries incompatible with life. The MP (military police) leads you over to the village chief.

History

S— Shortness of breath.
A— Tetanus toxoid.
M— None.
P— None.
L— 3 hours ago.
E— GSW as described above.

Injuries

1. Sucking chest wound on right anterior chest from a gunshot wound.
2. Hemothorax.
3. Closed left lower leg fracture.
4. Shock.

Patient Instructions

You should be alert and having difficulty breathing. Complain of pain when your right chest or your lower left leg is examined.

Moulage Instructions

Sucking chest wound and bruises on the lower leg can be made as described in the Coordinator and Instructor Guide section on moulage techniques. As an alternative, you can simulate the injuries by placing white tape on the affected areas and writing the injury ("sucking chest wound" and "broken leg") with a felt-tip pen. Simulate shock.

Instructor Information

Scene size-up—The police have secured the scene. Police and fire are on scene and can assist. There is 1 patient.

Initial assessment

General impression— Patient is lying on side, conscious, with obvious dyspnea. Patient states "I … can't … breathe."
LOC— Alert.
Airway— Clear and open.
Breathing— Rapid, shallow and gasping respirations.
Ventilation instructions— Direct team to assist ventilations.
Circulation
Pulses— Rapid radial pulses present.
Bleeding— Spot of blood visible on Right anterior chest; no major bleeding.
Skin color, condition, and temperature— Cyanotic, cold and clammy.

Decision— Rapid Trauma Survey due to mechanism and initial assessment.

Rapid trauma survey

Head— No injuries noted.
Neck— No obvious injuries.
Trachea— Midline.
Neck veins— Flat neck veins.
Chest
Looking— Sucking chest wound on right anterior chest.
Feeling— Crepitus on right side.
Listening—No breath sounds on right side; heart tones normal.
Percussion— Dull on right side.
Abdomen— No injuries noted. Soft, non-tender.
Pelvis— Stable.
Extremities
Lower—Swelling, tenderness, deformity of left lower leg.
Upper—No injuries noted. Good distal PMS.
Exam of posterior— Normal. No exit wound is found.
History (obtain from the patient)
Neurological
LOC— Alert.
Pupils— Equal and reactive.
Sensory— Normal.
Motor— Normal.
GCS— 4/5/6 = 15.

Decision— Load and Go. Notify hospital immediately that you are en route with a patient with a gunshot wound to the right anterior chest and also a closed extremity fracture. Seal gunshot wound of chest; give oxygen; start two large-bore IVs, but run at rate to maintain a radial pulse.

Reassessment exam

Subjective changes— No changes.

Neurological

LOC— Alert.

Pupils— Both 5mm, equal and reactive.

GCS— 4/5/6=15.

Airway— Clear and open.

Breathing— Rapid, shallow, gasping respirations. Continue assisting ventilations.

Circulation

Blood pressure— Blood pressure 88/58.

Pulses— Rapid, weak radial pulses.

Skin color, condition, and temperature— Cyanotic, cool, clammy.

Neck—No changes.

Trachea— Midline.

Neck veins— Flat.

Chest— No changes.

Abdomen— No changes.

Focused assessment of injuries

1. Sucking wound.
2. Closed lower leg fracture.

Check interventions

Ensure ventilations still effective (Oxygen?)

Sucking wound sealed?

Splint fracture to lower leg?

Secondary survey

History and vital signs— No changes.

ETC0_2: 26 mmHg, waveform square.

Neurological

LOC— Alert.

Pupils— Both 5 mm, equal and reactive.

Sensory— No injuries noted.

Motor— No injuries noted.

GCS— 4/5/6= 15.

Finger-stick glucose— N/A.

Head— No injuries noted.

Airway— Clear and open.

Breathing— 38 and shallow if not assisted.

Neck— No injuries.

Trachea— Midline.

Neck veins— Flat.

Circulation— BP 88/58.

Pulses— Pulse 134, weak at radial.

Skin color, condition, and temperature— Cyanotic, cool, clammy.

Chest

Looking— Sucking chest wound sealed on right anterior chest.

Feeling— Crepitus felt on right side.

Listening— No breath sounds on right side. Heart tones normal.

Percussion— Dull on right side.

Abdomen— Soft, non-tender.

Pelvis— Stable.

Extremities

Lower— Closed left lower leg fracture. Stabilized by splint. Good distal PMS.

Upper— No injuries noted. Good distal PMS.

ITLS Scenario 1 - Gunshot Wound (Dyspnea, Hemothorax, Extremity Injury)

Scene Size Up	
Standard Precautions	Gloves. Goggles.
Scene Hazards	None. The police have secured the scene.
Number of Patients	One.
Need for more help or equipment	Police and fire are on scene and can assist.
Mechanism of Injury	You have been called to the scene of a shooting incident. A female has injuries incompatible with life. A male has also been shot and the police lead you over to him.

Initial Assessment	
General Impression - Age, sex, position - Patient activity - Obvious Bleeding?	Pt. is found lying on side, conscious, with obvious dyspnea. Pt. states "I….. can't…… breathe".
LOC (AVPU)	Alert.
Delegate Spine	Direct team member to apply SMR.
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open.
Breathing - Rate, Depth, Effort	Rapid, shallow, gasping respirations. Direct team to assist ventilations.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp - Deadly bleeding?	Rapid radial pulses present. Cyanotic, cold, clammy. Spot of blood visible on R anterior chest.

Rapid Trauma Survey	
Head - DCAP-BLS-TIC - Fluid leaks (ears / nose) - Raccoon Eyes - Battle's Signs	 No. No. No. No.
Neck - DCAP-BLS-TIC - Tracheal Deviation - JVD - Collar once checked	 No obvious injury. Midline. Flat neck veins. Direct team member to apply.
Chest - Expose. - DCAP-BLS-TIC	Expose chest. Sucking chest wound on right anterior chest. Crepitus felt on right side. Direct team member to seal.
Breath Sounds (2 points)	No breath sounds on right side.
Abdomen - Expose. - DCAP-BLS-TIC - Rigidity or distention	 Expose abdomen. No injuries noted. Soft, non-tender.
Pelvis (DCAP-BLS-TIC)	Stable.
Lower Extremities - DCAP-BLS-TIC - Distal PMS	 Deformity of left lower leg. Stabilize. Good distal PMS.
Upper Extremities - DCAP-BLS-TIC - Distal PMS	No injuries noted. Good distal PMS.

Transport Decision / Packaging / Notification	
Transport Decision	Unstable, load and go.
Packaging	Check posterior during roll onto board. No exit wound is found.
Notification	Notify hospital immediately. Notification should include that you are en route with the victim of a gunshot wound (GSW) to the right anterior chest. Ventilations are being assisted, the sucking chest wound has been sealed, and the patient also has a closed extremity fracture.

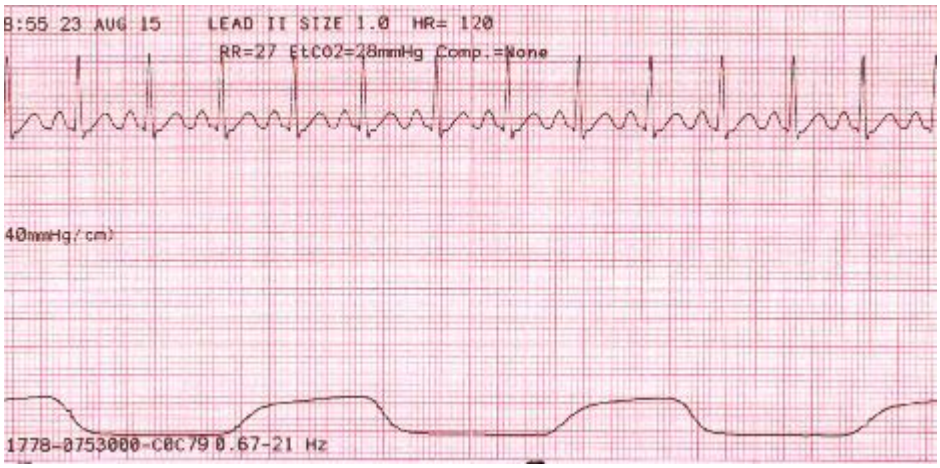
Reassessment Exam (every 5 minutes for unstable pt)	
LOC (AVPU)	Alert.
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open.
Breathing - Rate, Depth, Effort	Rapid, shallow, gasping respirations. Continue assisting ventilations.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp	Rapid, weak radial pulses. Cyanotic, cool, clammy.
Reassess Vital Signs	* In repeat Reassessment Exams.
Reassess Neck	No change.
Reassess Chest	No change.
Reassess Abdomen	No change.
Reassess interventions	Ensure ventilations still effective. Seal chest.

Secondary Survey	
History - Signs & Symptoms - Allergies - Medications - Past Medical History - Last Oral Intake - Events	 SOB. Tetanus toxoid. None. None. 3 hours ago. GSW as described above.
Vital Signs - Blood pressure - Heart rate / quality - Resp rate / quality - Initial ETCO2 - Waveform - SPO2 - Capillary blood glucose - LOC / GCS - Skin - Pupils	 88/58 134, weak at radial. 38 and shallow if not assisted. 26 Square 90% with O2 (if assisted). N/A. 4/5/6 = 15. Cyanotic, cool, clammy. Both 5mm, equal and reactive. Note: It is acceptable to initiate IV access at this time.
Head to Toe - Head - Neck - Chest - Breath sounds - Abdomen - Pelvis - Lower extremities - Upper extremities	 No injuries noted. No injuries. No tracheal shift or JVD. Sealed chest wound on right anterior chest No breath sounds on right side. Soft, non-tender. No injuries noted. Closed left lower leg fracture. Good distal PMS. No injuries noted. Good distal PMS.

SCENARIO 1 CAPNOGRAPH & ECG

Initial $ETCO_2$: 26
Waveform: Square

Since this is a hemothorax scenario (it is a perfusion problem), the waveform will be square throughout the scenario. The $ETCO_2$ corresponds with the MAP. As long as the patient is hypotensive, the $ETCO_2$ should be low. Care must be taken not to "hypoventilate" in an effort to raise the $ETCO_2$. A constant respiratory rate and depth is indicated. Only an increase in perfusion will increase the $ETCO_2$. In cases of shock, capnography is more a monitor of perfusion than it is ventilation.



ITLS SCENARIO 2

Setting

EMS/Prehospital: The patient is an unrestrained pregnant driver of a car that went off the road at 60 mph (96 kph) and hit a tree head on. The patient is still in the driver's seat.

Occupational Health/Industrial: You arrive on the scene of a commercial delivery truck and find the patient is an unrestrained pregnant driver that has hit a utility truck head-on at approximately 60 mph (96 kph).

Military: You are dispatched to an incident in front of the air base main gate. Upon arrival, you notice that it is a MVC (motor vehicle collision) between a logistical transport vehicle and a sedan. The unrestrained driver of the sedan is pregnant. The gate sentry states that the collision was head-on with an approximate speed of 60 mph (96 kph). The sedan bounced off the bollard.

History

S— "My hip hurts so bad! My chest and stomach too."
A— Penicillin.
M— Prenatal vitamins and Dilantin (phenytoin).
P— Epilepsy. 6 months pregnant.
L— 5 hours ago.
E— "I was driving down the road and woke up like this. I think I had a seizure."

Injuries

1. Posterior dislocation of left hip.
2. Fractured pelvis.
3. Shock.
4. Contusion of sternum.

Patient Instructions

You should be alert and complain of pain in the chest, abdomen, and left hip. When examined, you should complain of pain when the sternum or anterior ribs are palpated, when the pelvis is palpated, or when the left leg is moved in any way. Do not allow your left leg to be straightened. Scream at the top of your lungs at any attempt to straighten your left leg. Continually say, "I am pregnant—what about my baby?"

Moulage Instructions

Apply bruise to the sternum. Use one pillow to simulate pregnancy (unless model is actually pregnant). Simulate diaphoresis.

You can simulate the vehicle in the classroom with chairs.

Instructor Information

Scene size-up—No scene hazards. The vehicle is stable. Police and fire apparatus are on scene and can assist. There is 1 patient and she is still in the driver's seat.

Initial assessment

General impression— Potential for serious injuries. Patient is found sitting in the driver's seat of the vehicle, conscious, complaining that "my hip hurts so bad! I'm concerned about my baby! My chest and stomach hurt too."
LOC— Alert.
Delegate spine — Direct team member to apply Spinal Motion Restriction (SMR).
Airway— Clear and open.
Breathing— Normal rate and quality.
Ventilation instructions— Direct team member to apply O_2.
Circulation
Pulses— Rapid radial pulses present.
Bleeding— No external bleeding.
Skin color, condition, and temperature— Normal, warm and dry.

Decision— Rapid trauma survey due to mechanism.

Rapid trauma survey

Head— No obvious injury.
Neck— Normal, non-tender. Direct team member to apply collar once checked.
Trachea— Midline.
Neck veins— Flat neck veins.
Chest
Looking— Contusion on sternum.
Feeling— Tender sternum, no instability.
Listening— Breath sounds present and equal. Heart tones normal.
Percussion— N/A.
Abdomen— Obvious late pregnancy. Distended and tender.
Pelvis— Pain on palpation. Unstable.
Extremities
Lower — Left leg flexed at hip and knee, internally rotated. Right leg normal. Stabilize. Good distal PMS.
Upper— No injuries detected. Good distal PMS.
Exam of posterior— Normal.
History (obtain from the patient)

Decision— Unstable. Load and Go. Notify hospital immediately that you have a conscious pregnant female involved in a high-speed motor vehicle collision, with chest, abdominal, hip and pelvis injuries.

Reassessment exam

Subjective changes— Patient complains of increasing abdominal pain.

Neurological

LOC— Alert.

Pupils— Equal and reactive

GCS— 4/5/6=15.

Airway— Clear and open.

Breathing— Normal rate and quality.

Circulation

Blood pressure— If no IV fluids: BP 98/60; if IV fluids: BP 100/60.

Pulses— Rapid, weak radial pulses.

Skin color, condition, and temperature— Pale, cool, clammy. * Deterioration.

Neck— No changes.

Trachea— Midline.

Neck veins— Flat.

Chest— Unchanged. Breath and heart sounds normal.

Abdomen—No change.

Focused assessment of injuries

1. **Contusion of sternum**— Monitoring heart.
2. **Posterior dislocation of hip**— Splinted.
3. **Fractured pelvis**— Stabilized in vehicle.
4. **Shock**— Fluid boluses.

Check interventions

Is oxygen hooked up and turned on?

Hip splinted in flexed position?

Are IVs running at correct rate?

Patient on backboard tilted to the left?

Cardiac monitor applied? Sinus tachycardia

Pulse oximeter applied? 100% saturation

Secondary survey

History and vital signs— BP 98/62, pulse 138, respiration 26. If given a bolus of IV fluids: BP 100/70, pulse 110, respiration 24.

$ETCO_2$: 28 mmHg, waveform square.

Neurological

LOC— Alert and oriented.

Pupils— 4 mm, equal and reactive.

Sensory— Normal.

Motor— Normal.

GCS— 4/5/6= 15.

Finger-stick glucose— 6.5 mmol/l (105 mg/dl)

Head— No injuries noted.

Airway— Open.

Breathing— Normal rate and quality.
Neck— No tenderness or sign of trauma.
Trachea— Midline.
Neck veins— Flat.
Circulation— No external bleeding.
Chest
Looking— Unchanged.
Feeling—Sternal and anterior ribs tenderness.
Listening— Breath sounds still present and equal; heart sounds normal.
Percussion— Normal.
Abdomen— Distended. Pregnant. Increasing tenderness.
Pelvis— Do not reexamine.
Extremities
Upper— No injuries noted. Good distal PMS.
Lower— Unchanged from above. Weak distal pulses, normal sensation, you cannot straighten left hip.

ITLS Scenario 2 – Motor Vehicle Collision (Pregnant Pt with Dislocated Hip, Fractured Pelvis, Chest Injury)

Scene Size Up	
Standard Precautions	Gloves. Goggles.
Scene Hazards	None. The vehicle is stable.
Number of Patients	One.
Need for more help or equipment	Police and fire apparatus are on scene and can assist.
Mechanism of Injury	The patient is an unrestrained pregnant driver of a vehicle that went off the road at 60 mph (96 kph) and hit a tree head on. The patient is still in the driver's seat. ** Simulate vehicle in classroom with chairs.

Initial Assessment	
General Impression - Age, sex, position - Patient activity - Obvious bleeding?	Pt. is found sitting in the driver's seat of the vehicle, conscious, complaining that "my hip hurts so bad! I'm concerned about my baby! My chest and stomach hurt too."
LOC (AVPU)	Alert.
Delegate Spine	Direct team member to apply Spinal Motion Restriction (SMR).
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open.
Breathing - Rate, Depth, Effort	Normal rate and quality. Direct team member to apply O2.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp - Deadly bleeding?	Rapid radial pulses present. Normal, warm and dry. No external bleeding.

Rapid Trauma Survey	
Head - DCAP-BLS-TIC - Fluid leaks (ears / nose) - Raccoon Eyes - Battle's Signs	 No obvious injury. No. No. No.
Neck - DCAP-BLS-TIC - Tracheal Deviation - JVD - Collar once checked	 No obvious injury. Midline. Flat neck veins. Direct team member to apply.
Chest - Expose. - DCAP-BLS-TIC	Expose chest. Contusion on sternum. Tender, no instability.
Breath Sounds (2 points)	Present and equal.
Abdomen - Expose. - DCAP-BLS-TIC - Rigidity or distention	 Expose abdomen. Obvious late pregnancy. Distended and tender.
Pelvis (DCAP-BLS-TIC)	Pain on palpation. Unstable.
Lower Extremities - DCAP-BLS-TIC - Distal PMS	Left leg flexed at hip and knee, internally rotated. Right leg normal. Stabilize. Good distal PMS.
Upper Extremities - DCAP-BLS-TIC - Distal PMS	 No injuries detected. Good distal PMS.

Transport Decision / Packaging / Notification	
Transport Decision	Unstable, load and go.
Packaging	Extricate patient onto board. Ensure posterior is checked during move.
Notification	Notify hospital immediately. Notification should include that you have a conscious pregnant female involved in a high speed MVC, with chest, abdominal, hip and pelvic injuries.

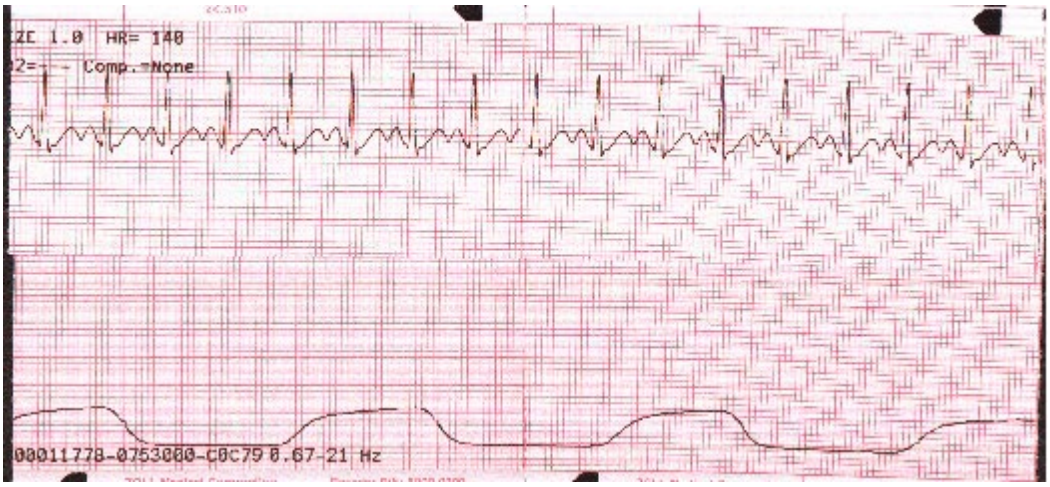
Reassessment Exam (every 5 minutes for unstable pt)	
LOC (AVPU)	Alert.
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open.
Breathing - Rate, Depth, Effort	Normal rate and quality.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp	Rapid, weak radial pulses. Pale, cool, clammy. * Deterioration.
Reassess Vital Signs	* In repeat Reassessment Exams
Reassess Neck	No change.
Reassess Chest	No change.
Reassess Abdomen	No change.
Reassess interventions	Ensure immobilization still effective.

Secondary Survey	
History - Signs & Symptoms - Allergies - Medications - Past Medical History - Last Oral Intake - Events	 "My hip hurts so bad! My chest and stomach too". Penicillin. Prenatal vitamins and Dilantin. Epilepsy. 6 months pregnant. 5 hours ago. "I was driving down the road and woke up like this. I think I had a seizure."
Vital Signs - Blood pressure - Heart rate / quality - Resp rate / quality - Initial ETCO2 - Waveform - SPO2 - Capillary blood glucose - LOC / GCS - Skin - Pupils	 98/62 if no fluids given; 100/70 if fluids 138 if no fluids, 110 if fluids, weak at radial. 26, shallow but effective. 28 Square 98% with O2. N / A. 4/5/6 = 15. Pale, cool, clammy. Both 4mm, equal and reactive. Note: It is acceptable to initiate IV access at this time, and bolus if required.
Head to Toe - Head - Neck - Chest - Breath sounds - Abdomen - Pelvis - Lower extremities - Upper extremities	 No injuries noted. No injuries. No tracheal shift or JVD. Sternal and anterior rib tenderness. Breath sounds present and equal. Distended. Pregnant. Increasing tenderness. Do not reexamine. Unchanged from above. Good distal PMS. No injuries note. Good distal PMS.

SCENARIO 2 CAPNOGRAPH & ECG

Initial $ETCO_2$: 28
Waveform: Square

Since this is a hemothorax scenario (it is a perfusion problem) the waveform will be square throughout the scenario. The $ETCO_2$ corresponds with the MAP. As long as the patient is hypotensive, the $ETCO_2$ should be low. Care must be taken not to "hypoventilate" in an effort to raise the $ETCO_2$. A constant respiratory rate and depth is indicated. Only an increase in perfusion will increase the $ETCO_2$. In cases of shock, capnography is more a monitor of perfusion than it is ventilations.



SCENARIO 3

Setting

EMS/Prehospital: The patient was thrown from an all-terrain vehicle (ATV) that crashed into a tree at high speed. The patient is lying on the grass near the roadside.

Occupational Health/Industrial: You respond to a reported accident at a dairy farm/milk processing plant. On arrival, security informs you there has been an ATV accident in the fields next to the woods. The patient was thrown from an ATV that crashed into the woods at high speed.

Military: During a field exercise, you respond to a reported accident. On arrival, the platoon commander informs you that there has been an ATV rollover in the field next to the woods. The woods and field have been cleared and are approachable.

History

S— "My leg is killing me. Please help!"
A— None.
M— None.
P— None.
L— 2 hours ago.
E— "I lost control and hit a tree."

Injuries

1. Open fracture of the right lower leg.
2. Fracture of pelvis.
3. Shock.

Patient Instructions

You should be alert and complain of pain in the right lower leg. When your pelvis is examined, you should cry out loudly with pain.

Moulage Instructions

A full-face or half-face helmet should be in place in all settings. Open fracture is best done with commercial strap-on moulage, but it can be made with wax or plumber's putty and pieces of bone. Simulate diaphoresis.

Instructor Information

Scene size-up— The scene is safe and there is 1 patient. Police and fire apparatus are on scene and can assist.

Initial assessment

General impression— The patient is lying near the roadside on the grass, complaining of right leg pain. He is wearing a helmet and a small amount of blood is noted on the right leg.
LOC— Alert.
Delegate spine— Direct team member to apply SMR. Remove helmet.
Airway— Clear and open.
Breathing— Normal rate and depth of ventilations.
Ventilation instructions— Direct team member to apply O_2.
Circulation
Pulses— Rapid radial pulse present.
Bleeding— Slight bleeding from right lower leg.
Skin color, condition, and temperature— Normal, warm and dry.

Decision— Rapid trauma survey due to mechanism.

Rapid trauma survey

Head— No sign of trauma (was wearing helmet).
Neck— No obvious injury. Direct team member to apply a collar once checked.
Trachea— Midline.
Neck veins— Flat.
Chest
Looking— No obvious injuries found.
Feeling— No TIC.
Listening— Breath sounds present and equal, normal heart sounds.
Percussion— Normal.
Abdomen— Slight tenderness of lower abdomen.
Pelvis— Unstable and tender. Stabilize.
Extremities
Upper— No injuries detected. Good distal PMS.
Lower— Open fracture of right lower leg with small amount of bleeding. Good distal PMS. Direct member to cover and stabilize.
Exam of posterior— Normal.
History (obtain from the patient)
Neurological
LOC— Alert.
Pupils— 4 mm, equal and reactive.
Sensory— Normal.
Motor— Normal.
GCS— 4/5/6= 15.

Decision— Load and Go (unstable pelvis); two IV lines; splint leg. (Strap legs together.)
Notify hospital immediately that you have a conscious patient with pelvis and lower extremity injuries that was thrown off an ATV at high speed.

Reassessment exam
Subjective changes— More tender in lower abdomen.
Initial assessment
LOC— Localizes to pain
Airway— Open and clear.
Breathing—20, good air movement.
Circulation
Pulses— Radial pulse present, rapid.
Skin color, condition, and temperature— Pale, cool, clammy. *Deterioration
History—SAMPLE, if not already done.
Vital signs— BP: 88/68.
Neurological Exam
Pupils— Equal and reactive.
GCS—9.
Neck— No change.
Trachea— Midline.
Neck veins— Flat.
Chest— Unchanged. Breath and heart sounds normal.
Abdomen— More tender in lower abdomen.
Focused assessment of injuries
1. **Abdomen**— Still tender.
2. **Pelvis**— Not rechecked.
3. **Right lower leg fracture**— Splinted, still has good PMS, no bleeding now.

Check interventions
Is oxygen hooked up and turned on?
Dressing blood-soaked?
Are IVs running at correct rate to maintain BP of at least 90?
Splint in good position?

Secondary Survey
Subjective changes— No changes.
Initial assessment
LOC— Alert?
Airway— Open.
Breathing— 20, good air movement.
Circulation— BP 88/68.
Pulses— 130, weak at radial.
Skin color, condition, and temperature— Pale, cool, clammy.
$ETCO_2$: 30, waveform square.
SPO_2: 98% with O_2.

History—SAMPLE, if not already done.
Neurological exam
Pupils— 4 mm, equal and reactive.
Sensory—Normal.
Motor— Normal.
GCS— 4/5/6=15.

Detailed Exam
Head— No injuries noted.
Neck— No injuries.
Trachea— No tracheal shift.
Neck veins— No JVD.
Chest
Looking— No injuries detected.
Feeling— No injuries.
Listening— Breath and heart sounds normal.
Percussion—Normal.
Abdomen— Tender lower abdomen. No distention.
Pelvis— Do not reexamine.
Extremities
Lower— Unchanged from above. Good distal PMS.
Upper— No injuries noted. Good distal PMS.

ITLS Scenario 3 - All Terrain Vehicle (ATV) Collision and Rollover (Conscious Pt with Pelvis and Lower Extremity Injuries)

Scene Size Up	
Standard Precautions	Gloves. Goggles.
Scene Hazards	None.
Number of Patients	One.
Need for more help or equipment	The police and fire apparatus are on scene and can assist.
Mechanism of Injury	The patient was thrown from an ATV that crashed into the woods at high speed. The patient is lying near the roadside on the grass.

Initial Assessment	
General Impression - Age, sex, position - Patient activity - Obvious bleeding?	Pt. is found on side on the grass, complaining of right leg pain. The patient is wearing a helmet and a small amount of blood is noted on the right leg.
LOC (AVPU)	Alert.
Delegate Spine	Direct team member to apply SMR. Remove helmet.
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open.
Breathing - Rate, Depth, Effort	Normal rate and depth of ventilations. Direct team member to apply O2.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp - Deadly bleeding?	Rapid radial pulse present. Normal, warm, and dry. Slight bleeding from right lower leg.

Rapid Trauma Survey	
Head - DCAP-BLS-TIC - Fluid leaks (ears / nose) - Raccoon Eyes - Battle's Signs	 No sign of trauma (was wearing helmet). No. No. No.
Neck - DCAP-BLS-TIC - Tracheal Deviation - JVD - Collar once checked	 No obvious injury. Midline. Flat neck veins. Direct team member to apply.
Chest - Expose. - DCAP-BLS-TIC	 Expose chest. No obvious injuries found.
Breath Sounds (2 points)	Present and equal.
Abdomen - Expose. - DCAP-BLS-TIC - Rigidity or distention	 Expose abdomen. Slight tenderness of lower abdomen. None.
Pelvis (DCAP-BLS-TIC)	Unstable and tender. Stabilize.
Lower Extremities - DCAP-BLS-TIC - Distal PMS	 Open fracture of right lower leg with small amount of bleeding. Good distal PMS. Direct member to cover and stabilize.
Upper Extremities - DCAP-BLS-TIC - Distal PMS	 No injuries detected. Good distal PMS.

Transport Decision / Packaging / Notification	
Transport Decision	Unstable, load and go.
Packaging	Direct member to strap legs together. Ensure posterior is checked during move.
Notification	Notify hospital immediately. Note that you have a conscious patient with pelvis and lower extremity injuries that was thrown off an ATV at high speed.

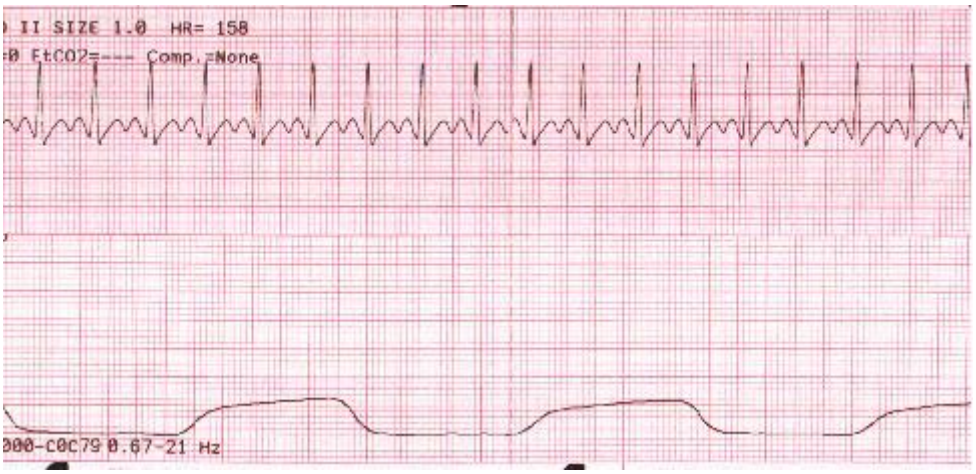
Reassessment Exam (every 5 minutes for unstable pt)	
LOC (AVPU)	Localizes to pain.
Airway - Snoring? Gurgling? Stridor? Silence?	Open and clear.
Breathing - Rate, Depth, Effort	Normal rate and quality.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp	Radial pulse present, very rapid. Pale, cool, clammy. * Deterioration
Reassess Vital Signs	* In repeat Reassessment Exams
Reassess Neck	No change.
Reassess Chest	No change.
Reassess Abdomen	More tender in lower abdomen.
Reassess interventions	N / A

Secondary Survey	
History - Signs & Symptoms - Allergies - Medications - Past Medical History - Last Oral Intake - Events	 "My leg is killing me. Please help!" None. None. None. 2 hours ago. "I lost control and hit a tree.
Vital Signs - Blood pressure - Heart rate / quality - Resp rate / quality - Initial ETCO2 - Waveform - SPO2 - Capillary blood glucose - LOC / GCS - Skin - Pupils	 88/68. 162, weak at radial. 34, shallow but effective. 30 Square 98% with O2. N / A. 4/5/6 = 15. Pale, cool, clammy. 4mm, equal and reactive. Note: It is acceptable to initiate IV access at this time, and bolus if needed.
Head to Toe - Head - Neck - Chest - Breath sounds - Abdomen - Pelvis - Lower extremities - Upper extremities	 No injuries noted. No injuries. No tracheal shift or JVD. No injuries detected. Breath sounds present and equal. Tender lower abdomen. No distention. Do not reexamine. Unchanged from above. Good distal PMS. No injuries note. Good distal PMS.

SCENARIO 3 CAPNOGRAPH & ECG

Initial $ETCO_2$: 30
Waveform: Square

Since this is a perfusion problem, the waveform will be square throughout the scenario. The $ETCO_2$ corresponds with the mean arterial pressure (MAP). As long as the patient is hypotensive, the $ETCO_2$ should be low. Care must be taken not to "hypoventilate" in an effort to raise the $ETCO_2$. A constant respiratory rate and depth is indicated. Only an increase in perfusion will increase the $ETCO_2$. In cases of shock, capnography is more a monitor of perfusion than it is ventilations.



SCENARIO 4

Setting

EMS/Prehospital: A young male was struck while walking along the side of the road, by a vehicle travelling approximately 50 mph (80 kph).

Occupational Health/Industrial: A delivery truck left the factory about 5 minutes ago and is travelling approximately 50 mph (80 kph). The driver calls in to dispatch to report hearing a loud “thud” like he hit something. As he slows down and looks in his rear view mirror, he sees what appears to be a body in the road.

Military: While on a mounted patrol in armoured vehicles with hatches down, the lead vehicle reports hearing a loud “thud.” The middle vehicle then reports a “body” on the “road.”

History

S— “Can't breathe.”
A— Penicillin.
M— Insulin.
P— Diabetes.
L— Unknown.
E— "He drove right over me!"

Injuries

1. Tension pneumothorax on left side.
2. Intra-abdominal bleeding.
3. Fracture of the left femur.
4. Hypoglycemia.

Patient Instructions

You should be confused and disoriented. You are having difficulty breathing. Complain of pain when your abdomen is palpated or your left chest or upper left leg is examined.

Moulage Instructions

Apply contusions and abrasions on left chest and abdomen. Use pants with a large tear in the left thigh area. The left thigh should have a large bruise, or write “fractured femur” on a piece of white tape with a felt-tip pen and apply it to the left thigh. Apply some fake blood to an area of the scalp (fake blood mixed with K-Y Jelly works well here—do not use this on light-colored hair, as it will stain the hair). Simulate diaphoresis.

Instructor Information

Scene size-up— No scene hazards. You and your partner have arrived first on scene. Fire department is en route, and there is a first aid responder on scene. There is 1 patient.

Initial assessment

General impression— Patient is found lying semi-prone on his left side. His eyes are closed on approach and obvious respiratory distress is heard. No obvious major bleeding is observed.

LOC— Eyes open to verbal, patient appears confused.

Delegate spine—Direct team member to apply SMR.

Airway— Clear and open.

Breathing— Rapid respirations with shallow air movement.

Ventilation instructions— Should order O_2 and ventilatory assistance.

Circulation

Pulses— Weak, rapid pulses at radial and carotid.

Bleeding— No major bleeding observed.

Skin color, condition, and temperature— Cyanotic, cool, clammy skin.

Decision— Rapid trauma survey due to mechanism and initial assessment.

Rapid trauma survey

Head— Matted blood in hair.

Neck— No injuries observed. Direct team member to apply collar once checked.

Trachea—Possibly tracheal deviation to right side.

Neck veins— Distended jugular veins.

Chest

Looking— Contusions on left side of chest.

Feeling— Crepitus and tender on palpation.

Listening— Decreased air entry on left side. Heart sounds present but difficult to hear.

Percussion— Hyper-resonant if percussed.

Abdomen— Tender to palpate. Slight distention.

Pelvis— Nothing significant found.

Extremities

Lower— Left femur swelling, tenderness, deformity. Expose. Direct team member to stabilize if resources available.

Upper— No injuries noted.

Exam of posterior— No DCAP-BLS-TIC.

History (obtain from the patient).

Neurological

LOC—Confused and abusive, will not follow commands.

Pupils—Equal and reactive.

Sensory—Normal.

Motor—Normal.

GCS—3/4/5=12.

Fingerstick glucose—40 mg/dl (2.4 mmol/l).

Decision—Load and go. Notify hospital immediately that patient is short of breath, with a tension pneumothorax requiring decompression. Consider immediate decompression of tension pneumothorax. (If not done, patient deteriorates as tension pneumothorax becomes larger. Blood pressure drops steadily.) Splint left femur when in ambulance. Two IV lines. Glucose per local protocol (IV or glucagon)

Reassessment Exam

Subjective changes— If given glucose, patient feels better now.

Initial assessment

LOC— Eyes open to verbal, patient appears more confused.

Airway— Clear and open.

Breathing— Rapid respirations with shallow air movement. Continue ventilations.

Circulation

Pulses— Radial pulses now absent. ** Change ** Carotid pulses still rapid and present.

Skin color, condition, and temperature— Cyanotic, cool, clammy skin.

History—SAMPLE, if not already done.

Vital Signs— Blood pressure 100/70 if decompression and fluid bolus. If not resolved, 70/40. HR of 120 per minute.

Neurological exam

Pupils— Equal and reactive.

GCS— 3/4/5=12.

Neck

Trachea—Tracheal deviation to right side. (Student must check at suprasternal notch)

Neck veins— Increased jugular vein distention.

Chest— Absent air entry on left side.

Abdomen— No changes.

Focused assessment of injuries

1. **Scalp**— No further bleeding.
2. **Pneumothorax**— As above.
3. **Abdomen**— As above.
4. **Left femur fracture**— Good PMS.

Check interventions

Is oxygen hooked up and turned on?

Decompression needle still patent?

Are IVs running? Rate?

Traction splint on left leg? PMS still OK?

Cardiac monitor applied?

Pulse oximeter applied? 92% saturation.

Secondary Survey

Subjective changes— If pneumothorax decompressed, patient feels better now.

Initial assessment

LOC— Still confused and abusive, will no follow commands.

Airway— Open and clear.

Breathing— Improved movement of air if tension pneumothorax has been decompressed; otherwise, worsening respiration with absent breath sounds

Circulation (*if not decompressed*)

Pulses— Radial pulses now absent. Carotid pulses still rapid and present.

Skin color, condition, and temperature— Cyanotic, cool, clammy skin.

History— SAMPLE, if not already done.

Vital signs— BP 90/50. BP 70/40 if not decompressed. HR still 120.

$ETCO_2$— 22, waveform square.

SPO_2— 91% (assisted ventilations).

Neurological exam

Pupils— Equal and reactive.

Sensory— Normal.

Motor— Normal.

GCS— 3/4/5=12.

Finger-stick glucose—2.4 mmol/L (40mg/dl). (If glucose given earlier, 6.0mmol/L [106mg/dl]).

Detailed Exam

Head— As before.

Neck

Trachea— Increased tracheal deviation.

Neck veins— JVD.

Chest

Looking— Contusions on left side of chest.

Feeling— Tender to palpate.

Listening— Absent air entry on left side.

Percussion— Hyper-resonant if percussed.

Abdomen—Increased abdominal distention.

Pelvis— As before.

Extremities

Upper— As before.

Lower— As before.

ITLS Scenario 4 – Pedestrian struck by motor vehicle (Tension Pneumothorax/Femur Injury)

Scene Size Up	
Standard Precautions	Gloves. Goggles.
Scene Hazards	None.
Number of Patients	One.
Need for more help or equipment	You and your partner have arrived first on scene. Fire department is en route, and there is a first aid responder on scene.
Mechanism of Injury	A young male was struck walking along the side of the road, by a vehicle travelling approximately 50 mph (80 kph).

Initial Assessment	
General Impression - Age, sex, position - Patient activity - Obvious bleeding?	Patient is found lying semi-prone on his left side. His eyes are closed on approach and obvious respiratory distress is heard. No obvious major bleeding is observed.
LOC (AVPU)	Eyes open to verbal, patient appears confused.
Delegate Spine	Direct team member to apply SMR.
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open.
Breathing - Rate, Depth, Effort	Rapid resps with shallow air movement. Requires ventilations (O2).
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp - Deadly bleeding?	Weak, rapid pulses at radial and carotid. Cyanotic, cool, clammy skin. No major bleeding observed.

Rapid Trauma Survey	
Head - DCAP-BLS-TIC - Fluid leaks (ears / nose) - Raccoon Eyes - Battle's Signs	 Matted blood in hair. None observed. None observed. None observed.
Neck - DCAP-BLS-TIC - Tracheal Deviation - JVD - Collar once checked	 No injuries observed. Possibly tracheal deviation to right side. Distended jugular veins Direct team member to apply collar.
Chest - Expose. - DCAP-BLS-TIC	 Expose chest. Contusions on left side of chest. Crepitus and tenderness felt on palpation. Heart tones normal.
Breath Sounds (2 points)	Decreased air entry on left side. Hyper-resonant if percussed.
Abdomen - Expose. - DCAP-BLS-TIC - Rigidity or distention	 Expose abdomen. Tender to palpate. Slight distention.
Pelvis (DCAP-BLS-TIC)	Nothing significant found.
Lower Extremities - DCAP-BLS-TIC - Distal PMS	Left femur swelling, tenderness, deformity. Expose. Direct team member to stabilize if resources available.
Upper Extremities - DCAP-BLS-TIC - Distal PMS	No upper extremity injuries noted.

Transport Decision / Packaging / Notification	
Transport Decision	Unstable, load and go.
Packaging	Check posterior during roll onto board.
Notification	Notify hospital immediately. Note that patient is short of breath, with a tension pneumothorax requiring decompression.

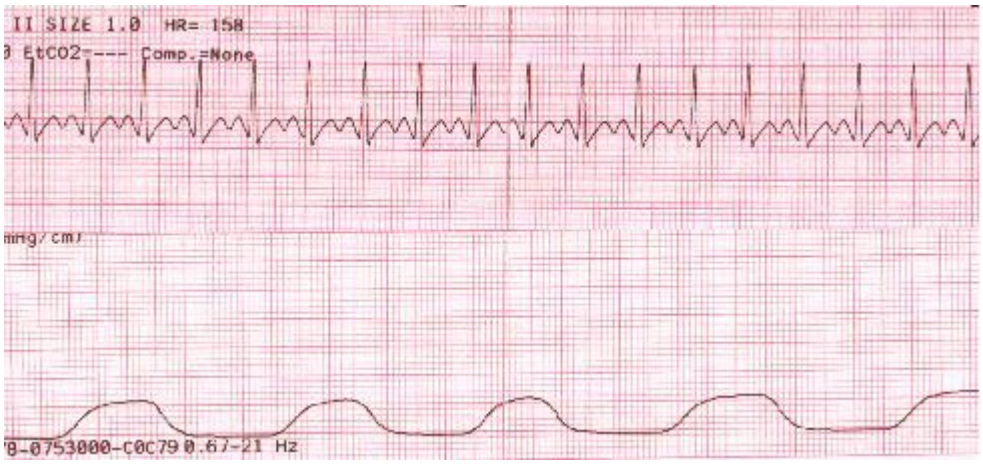
Reassessment Exam (every 5 minutes for unstable pt)	
LOC (AVPU)	Eyes open to verbal, patient appears more confused.
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open.
Breathing - Rate, Depth, Effort	Rapid respirations with shallow air movement. Continue ventilations.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp	Radial pulses now absent. ** Change ** Carotid pulses still rapid and present. Cyanotic, cool, clammy skin.
Reassess Vital Signs	* In repeat Reassessment Exams
Reassess Neck	Visible tracheal deviation to right side. Increased jugular vein distention
Reassess Chest	Absent air entry on left side
Reassess Abdomen	No changes
Reassess interventions	Ventilations still effective but decreased compliance.

Secondary Survey	
History - Signs & Symptoms - Allergies - Medications - Past Medical History - Last Oral Intake - Events	 "Can't breathe" Penicillin Insulin Diabetes Unknown "He drove right over me!"
Vital Signs - Blood pressure - Heart rate / quality - Resp rate / quality - Initial ETCO2 - Waveform - SPO2 - Capillary blood glucose - LOC / GCS - Skin - Pupils	 90/50 (70/40 if not decompressed) 150 36, shallow unless ventilated 22 (if decompressed, returns to 40) Square 91% with assisted ventilations 2.4 mmol/L (40mg/dl). (If given earlier, 6.0 mmol/L [106mg/dl]). 3/4/5 = 12 Cool, pale, clammy Equal and reactive Note: It is acceptable to initiate IV access and treat the hypovolemia (N/S bolus) at
Head to Toe (Detailed Exam) - Head - Neck - Chest - Breath sounds - Heart sounds - Abdomen - Pelvis - Lower extremities - Upper extremities	 As before. Increased tracheal deviation and JVD. As before. Absent air entry on left side. As before. Increased abdominal distention. As before. As before. As before.

SCENARIO 4 CAPNOGRAPH & ECG

Initial $ETCO_2$: 22
Waveform: Square

This is also a perfusion scenario. With proper decompression technique, the $ETCO_2$ should return to 40 mmHg.



SCENARIO 5

Setting

EMS/Prehospital: A patient was leaning over a third floor balcony when the railing gave way and the patient and railing fell approximately 35 feet (10 m) to the ground.

Occupational Health/Industrial: You respond to a crude oil refining factory for a reported fall. One of the employees was attempting to make a repair at approximately the 35 ft. (10 m) level when a railing gave way and his safety line failed. The patient and railing fell to the ground.

Military: You respond to a reported fall while in port. A crew member was making repairs to the ship navigation radar at the approximate level of 35 feet (10 m) when a railing gave way and his safety line failed. The patient and railing fell to the deck.

History

S—"I hurt all over."
A—Penicillin.
M—Insulin.
P—Diabetes.
L—Last night. Did not eat breakfast today.
E—"The railing gave way!"

Injuries

1. Hypoglycemia.
2. Fractured pelvis.
3. Scalp injury.
4. Abdominal injury.

Patient Instructions

You are confused but able to respond to questions. You feel and express pain when abdomen is palpated in all four quadrants. You cry out in pain when pelvis is examined.

Moulage Instructions

Patient has a laceration on the scalp with slight bleeding. Pelvis is fractured.

Instructor Information

Scene size-up— The fallen railing is on the ground near the patient and loose railing is hanging above. There is 1 patient.

Initial assessment

General impression— Patient is found lying on the left side, holding onto his left upper leg. A small amount of blood is visible on the patient's scalp. The patient is obviously confused and talking.
LOC— Alert but confused.
Delegate spine— Direct team member to apply SMR.
Airway— Clear and open.
Breathing— Normal rate and depth of ventilations.
Ventilation instructions— Direct team member to apply O2.
Circulation
Pulses— Rapid radial pulse present.
Bleeding— Slight bleeding from scalp wound.
Skin color, condition, and temperature— Normal, warm, and dry.

Decision— Rapid trauma survey due to mechanism of injury.

Rapid trauma survey

Head— Slight bleeding from scalp laceration. Direct team member to control bleeding. Otherwise normal.
Neck— No obvious injury. Direct team member to apply collar once checked.
Trachea— Midline.
Neck veins— Flat.
Chest
Looking— No obvious injuries found.
Feeling— No crepitus or tenderness.
Listening— Breath sounds present and equal.
Percussion— Normal.
Abdomen— Diffusely tender to palpation.
Pelvis— Tender and unstable. Direct team member to secure pelvis.
Extremities
Lower— No injuries detected. Good distal PMS.
Upper— No injuries detected. Good distal PMS.
Exam of posterior— Normal.

Decision— Unstable, load and go. Direct team member to strap legs together. Notify hospital immediately that you have a confused patient with scalp, abdominal and pelvic injuries resulting from a significant fall.

Reassessment exam

Subjective changes—Patient states "abdominal pain is worsening."

Neurological

LOC— Patient increasingly confused.

Pupils— 4 mm equal and reactive.

GCS— 4/4/6=14.

Airway— Clear and open.

Breathing— Normal rate and quality.

Circulation

Blood pressure— 110/70.

Pulses— Radial pulse weak and rapid.

Skin color, condition, and temperature— Pale, cool, and clammy. **Deterioration.

Neck— No change.

Trachea— Midline.

Neck veins— Flat.

Chest— No change.

Abdomen— More tender in lower abdomen.

Focused assessment of injuries

1. **Scalp**— Scalp wound.
2. **Abdomen**— Increasing tenderness.
3. **Hypoglycemia**— 2.2 mmol/L (40mg/dl).

Check interventions

Secondary survey

History and vital signs— SAMPLE history from patient if not already done.

Neurological

LOC— Confused.

Pupils— 4 mm, equal and reactive.

Sensory— Normal.

Motor— Normal.

GCS— 4/4/6=14.

Fingerstick glucose— 2.2 mmol/L (40 mg/dl). (If glucose given, 6.7 mmol/L [120 mg/dl]).

$ETCO_2$— 40, waveform square (decreases with perfusion compromise as patient deteriorates).

Head— Scalp wound.

Airway— Clear and open.

Breathing— 24, normal rate and depth.

Neck— No injuries.

Trachea— Midline.

Neck veins— Flat.

Circulation— BP 110/70, pulse 100 and weak at radial. Skin pale, cool, clammy.

Chest

Looking— No injuries detected.

Feeling— No crepitus or tenderness.
Listening— Breath sounds present and equal.
Percussion— Normal.

Abdomen— Increasing abdominal tenderness.

Pelvis— No changes.

Extremities

Lower— Unchanged from above. Good distal PMS.
Upper— No injuries noted. Good distal PMS.

ITLS Scenario 5 - Fall from Balcony on 3rd Floor (Hypoglycemic Pt with Fractured Pelvis, Scalp Injury, Abdominal Injury)

Scene Size Up	
Standard Precautions	Gloves. Goggles.
Scene Hazards	Railing near patient and loose railing hanging above.
Number of Patients	One.
Need for more help or equipment	None.
Mechanism of Injury	You respond to a reported fall in which a railing gave way and the patient and railing fell approximately 35 feet (10 m) to the ground.

Initial Assessment	
General Impression - Age, sex, position - Patient activity - Obvious bleeding?	Pt. is found lying on left side holding onto his left upper leg. A small amount of blood is visible on the patient's scalp. The patient is obviously conscious and talking.
LOC (AVPU)	Alert but CONFUSED.
Delegate Spine	Direct team member to apply SMR.
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open.
Breathing - Rate, Depth, Effort	Normal rate and depth of ventilations. Direct team member to apply O2.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp - Deadly bleeding?	Rapid radial pulse present. Normal, warm, and dry. Slight bleeding from scalp wound.

Rapid Trauma Survey	
Head - DCAP-BLS-TIC - Fluid leaks (ears / nose) - Raccoon Eyes - Battle's Signs	 Slight bleeding from scalp lac. Control. Otherwise normal. No. No. No.
Neck - DCAP-BLS-TIC - Tracheal Deviation - JVD - Collar once checked	 No obvious injury. Midline. Flat neck veins. Direct team member to apply.
Chest - Expose. - DCAP-BLS-TIC	 Expose chest. No obvious injuries found.
Breath Sounds (2 points)	Present and equal.
Abdomen - Expose. - DCAP-BLS-TIC - Rigidity or distention	 Expose abdomen. Diffusely tender to palpation. None.
Pelvis (DCAP-BLS-TIC)	Tender, and unstable, direct team member to secure pelvis
Lower Extremities - DCAP-BLS-TIC - Distal PMS	 No injuries detected. Good distal PMS.
Upper Extremities - DCAP-BLS-TIC - Distal PMS	 No injuries detected. Good distal PMS.

Transport Decision / Packaging / Notification	
Transport Decision	Unstable, load and go.
Packaging	Direct member to strap legs together. Ensure posterior is checked during move.
Notification	Notify hospital immediately. Note that you have a confused patient with scalp, abdominal and pelvic injuries resulting from a significant fall.

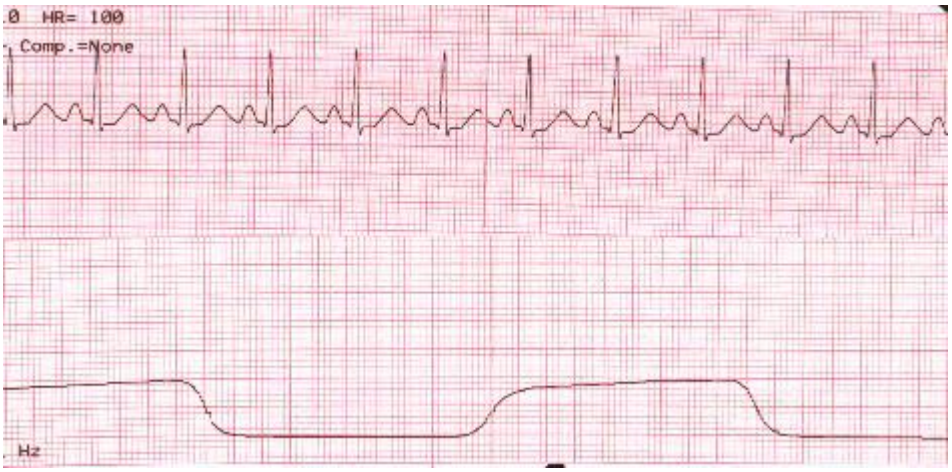
Reassessment Exam (every 5 minutes for unstable pt)	
LOC (AVPU)	Patient INCREASINGLY confused. Pt. states "abdominal pain is worsening".
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open.
Breathing - Rate, Depth, Effort	 Normal rate and quality.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp	 Radial pulse weak and rapid. Pale, cool, clammy. ** Deterioration
Reassess Vital Signs	* In repeat Reassessment Exams
Reassess Neck	No change.
Reassess Chest	No change.
Reassess Abdomen	More tender in lower abdomen.
Reassess interventions	N / A

Secondary Survey	
History - Signs & Symptoms - Allergies - Medications - Past Medical History - Last Oral Intake - Events	 "I hurt all over". Penicillin. Insulin. Diabetes. Last night. Did not eat breakfast today. "The railing gave way!"
Vital Signs - Blood pressure - Heart rate / quality - Resp rate / quality - Initial ETCO2 - Waveform - SPO2 - Capillary blood glucose - LOC / GCS - Skin - Pupils	 110/70. 100, weak at radial. 24, normal rate and depth. 40 mmHg (decreases as patient deteriorates Square 99% with O2. 2.2 mmol/L (40mg/dl) (If glucose given, 6.7 mmol/L [120 mg/dl]). 4/4/6 = 14. Pale, cool, clammy. 4 mm, equal and reactive. Note: It is acceptable to initiate IV access at this time, and bolus if needed. Glucose should be administered.
Head to Toe - Head - Neck - Chest - Breath sounds - Abdomen - Pelvis - Lower extremities - Upper extremities	 Scalp wound. No injuries. No tracheal shift or JVD. No injuries detected. Breath sounds present and equal. Increasing abdominal tenderness. No changes. Unchanged from above. Good distal PMS. No injuries note. Good distal PMS.

SCENARIO 5 CAPNOGRAPH & ECG

Initial $ETCO_2$: 40
Waveform: Square

In this case, the $ETCO_2$ is initially normal with the normal MAP. However, if this person deteriorates, the $ETCO_2$ should reflect it by decreasing.



SCENARIO 6

Setting

EMS/Prehospital: A young male was found in an alley. The police state that the patient was involved in a gang-style attack.

Occupational Health/Industrial: A factory supervisor is found in an alley at the back of the factory. The police state that the patient was involved in an attack by a former employee whose job was terminated earlier in the week.

Military: A Sergeant-Major was found in an alley at the back the barracks. The MPs (military police) state the casualty was involved in an attack by a soldier who was disciplined earlier in the week.

History

S— Gunshot wound (GSW); head and extremity trauma.
A— Unknown.
M— Unknown.
P— Unknown.
L— Unknown.
E— Found post assault in an alley.

Injuries

1. Contusion to the face, bleeding from right ear and bruising behind right ear.
2. Severe bleeding from left forearm GSW.
3. Moderately bleeding GSW to left upper leg.
4. Deformity to left femur, mid thigh.
5. GSW to right posterior flank.

Patient Instructions

You are lying on the ground with your eyes closed and moaning. You moan whenever your left forearm or left thigh is touched or moved.

Moulage Instructions

Patient has contusions to his face**,** severe bleeding from a wound on his left forearm and left femur. He has a deformity to his left mid thigh and a GSW to his right flank area.

Instructor Information

Scene size-up— You are called to a scene where a young man was found in an alley following a gang style assault. Police are in attendance. Scene is safe. You have 1 patient.

Initial assessment

General impression— Patient is lying prone in the alley.
Bleeding— Obvious bleeding from left femur and left arm. Delegate bleeding control.
LOC— Moans to pain.
Delegate spine— Direct team member to apply SMR.
Airway— Clear and open.
Breathing— Slow and shallow respirations.
Ventilation instructions— Direct team member to assist ventilations at 10-12/minute.
Circulation

Pulses— Radial pulse absent. Rapid carotid pulse.
Bleeding— Severe bleeding from left forearm and moderate bleeding from left leg, should now be controlled.
Skin color, condition, and temperature— Pale, cool and clammy.

Decision— Direct member to control bleeding. Then perform a rapid trauma survey due to mechanism and assessment.

Rapid trauma survey

Head— Contusion to face. Bleeding from right ear. Bruising behind ear on right side.
Neck— No obvious injury.

Trachea— Midline.
Neck veins— Flat.

Chest

Looking— No injuries noted.
Feeling— No injuries noted.
Listening— Lung sounds equal and clear bilaterally.
Percussion—Normal.

Abdomen— No injuries noted. Soft, no tenderness.
Pelvis— Stable.
Extremities

Lower— Deformity with left femur fracture. Moderate bleeding from gunshot wound to left leg. Direct team member to stabilize. No distal pulse.
Upper— Bleeding gunshot wound on left forearm now controlled. Direct member to stabilize. No movement, sensation.
Check interventions— MUST check that tourniquets are applied correctly. No distal pulses.

Exam of posterior— Gunshot wound over the right flank area with moderate bleeding. Direct team member to control the bleeding.

Decision: Load and go. Notify the hospital that you have a young male who has been assaulted. He has a GCS of 7 with assisted ventilations. He has a gunshot wound to his right posterior flank, left arm and left femur. Tourniquets applied. Likely left femur fracture.

Reassessment exam

History— (unable to be obtained from the patient).

Vital signs— BP 70/40. P 140, R 8 if unassisted, SPO_2 no capture.

Neurological

LOC— Moans to pain. Eyes do not open.

Pupils— Left 5 mm and normal, right 8 mm and sluggish.

Sensory— Moans to pain.

Motor— Withdraws to pain.

GCS— 7 (1/2/4).

Airway— Intubated.

Breathing—Assisted ventilations at 10-12/minute.

Circulation

Blood pressure—70/40 if no fluids; 80/50 with fluids. (Fluids should be established en route to hospital.)

Pulses—140 if no fluids; 130 with fluids.

Skin color, condition, and temperature—Pale, cold and clammy.

Neck

Trachea— Midline.

Neck veins— Flat.

Chest— No obvious injuries.

Abdomen— No injuries noted.

Focused assessment of injuries

1. Contusion to the face.
2. Severe bleeding from left forearm from GSW controlled with tourniquet
3. Bleeding from left leg from GSW controlled with tourniquet
4. Deformity to left femur.
5. GSW to right posterior flank.

Secondary survey

History and vital signs— BP 90/60, pulse 120, RR 8 if unassisted.

Neurological

LOC— Intubated.

Pupils— Left 5 mm and normal, right 8 mm and sluggish.

Sensory— None.

Motor— None.

GCS— 3.

Fingerstick glucose— 6.0 mmol/L (106 mg/dl).

$ETCO_2$— 20, waveform square

Head— Unchanged.

Airway— Intubated.

Breathing— Assisted at 10-12/minute.

Neck

Trachea— Midline.

Neck veins— Flat.

Circulation—Pulse 120. Skin pale, cold, clammy,

Chest

Looking— Unchanged.

Feeling— Unchanged.

Listening— Breath sounds equal and clear bilaterally with assistance.

Percussion—Normal

Abdomen— Unchanged.

Pelvis— Unchanged.

Extremities

Upper— Tourniquets working.

Lower— Tourniquets working

ITLS Scenario 6 – Assault (Multi-system Trauma)

Scene Size Up	
Standard Precautions	Gloves. Goggles.
Scene Hazards	None.
Number of Patients	One.
Need for more help or equipment	Police are on scene and can assist.
Mechanism of Injury	A young male is found in an alley. The police state that the patient was involved in an attack.

Initial Assessment	
General Impression - Age, sex, position - Patient activity - Obvious bleeding?	Patient is lying prone on the ground in the alley. His eyes are closed, contusions are noted on the face, and severe bleeding is observed on the left forearm and thigh.
Control Bleeding	Delegate control with tourniquet(s).
LOC (AVPU)	Moans to pain.
Delegate Spine	Direct team member to apply c-spine.
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open.
Breathing - Rate, Depth, Effort	Slow, shallow respirations. Direct team member to assist ventilations at 10-12 breaths/minute.
Circulation - Pulse rate/rhythm/quality - Skin color/cond/temp - Deadly bleeding?	Radials absent, rapid at carotid. Pale, cool, clammy Severe bleeding at left forearm and moderate bleeding from femur. Direct member to control if not done so.

Rapid Trauma Survey	
Head - DCAP-BLS-TIC - Fluid leaks (ears / nose) - Raccoon Eyes - Battle's Signs	 Facial contusions noted. Bleeding from right ear. No. Present on right side.
Neck - DCAP-BLS-TIC - Tracheal Deviation - JVD - Collar once checked	 No obvious injury. Midline. Flat neck veins. Direct team member to apply SMR.
Chest - Expose. - DCAP-BLS-TIC	 Expose chest. No injuries noted.
Breath Sounds (2 points)	Clear air entry bilaterally.
Abdomen - Expose. - DCAP-BLS-TIC - Rigidity or distention	 Expose abdomen. No injuries noted. Soft, no tenderness.
Pelvis (DCAP-BLS-TIC)	Stable.
Lower Extremities - DCAP-BLS-TIC - Distal PMS	 Deformed open left femur fracture. Moderately bleeding GSW left leg; should be controlled. No distal pulse.
Upper Extremities - DCAP-BLS-TIC - Distal PMS	 Bleeding GSW on left forearm now easing. Direct member to control and stabilize. No movement/sensation, good distal pulse.

Transport Decision / Packaging / Notification	
Transport Decision	Unstable, load and go.
Packaging	Strap legs together to stabilize injuries. Check posterior during roll onto board. Pt has a gunshot wound with moderate bleeding over right flank. Control.
Notification	Notify hospital immediately.

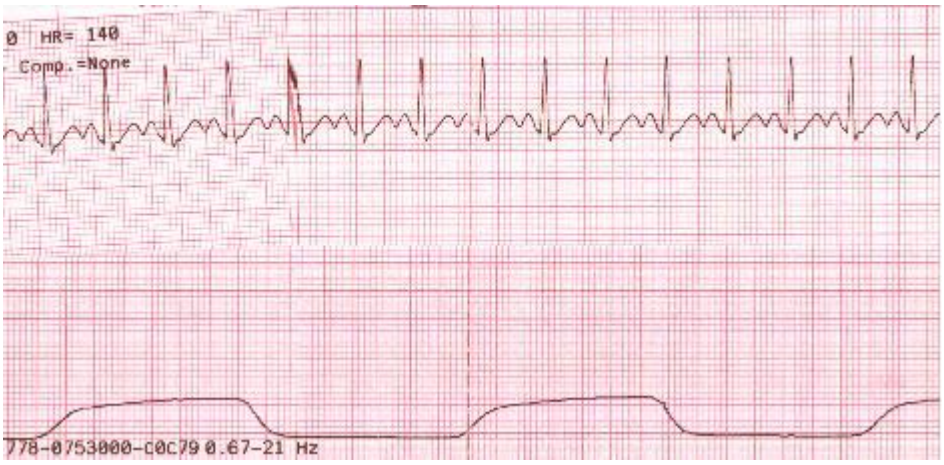
Reassessment Exam (every 5 minutes for unstable pt)	
LOC (AVPU)	Moans to pain.
Airway - Snoring? Gurgling? Stridor? Silence?	Intubated.
Breathing - Rate, Depth, Effort	Slow, shallow respirations (rate of 8/min if not ventilated). Continue ventilations at 10-12/minute.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp	 Radials absent, rapid at carotid. Pale, cool, clammy.
Reassess Vital Signs	BP 70/40, P 140 (if no fluids). BP 80/50, P 130 (with fluids).
Reassess Neck	No change.
Reassess Chest	No change.
Reassess Abdomen	No change.
Reassess interventions	Ensure ventilations still effective.

Secondary Survey	
History - Signs & Symptoms - Allergies - Medications - Past Medical History - Last Oral Intake - Events	 Head and extremity trauma. Unknown. Unknown. Unknown. Unknown. Found post assault in alley.
Vital Signs - Blood pressure - Heart rate / quality - Resp rate / quality - Initial ETCO2 - Waveform - SPO2 - Capillary blood glucose - LOC / GCS - Skin - Pupils	 90/60 after second fluid bolus. 120. 8 if unassisted. 20. Square. No capture. 6.0 mmol/L (106 mg/dl). 3. Pale, cool, clammy. Left: 5 mm and normal. Right: 8 mm and sluggish. Note: It is acceptable to initiate IV access and treat the hypovolemia (N/S bolus) at this time. Target BP is 90 systolic.
Head to Toe - Head - Neck - Chest - Breath sounds - Abdomen - Pelvis - Lower and upper extremities	 Multiple contusions, blood from right ear, Bruising behind right ear Unchanged. No injuries noted. Equal air entry to bases with ventilation. Unchanged. As before. Deformed left femur. Tourniquet on left leg and arm. Distal pulses absent indicating tourniquet applied correctly.

SCENARIO 6 CAPNOGRAPH & ECG

Initial $ETCO_2$: 20
Waveform: Square

This is also a perfusion issue with the closed head injury symptoms. As perfusion increases, $ETCO_2$ should also increase, no more than normal.



SCENARIO 7

Setting

EMS/Prehospital: The patient was performing stunts on his motorcycle when he lost control and collided with a sign post. The police called for EMS.

Occupational Health/Industrial: The worker was performing stunts on his motorcycle in the garage of the factory and lost control and collided with a sign post. Workers have called you as the medical response for the factory.

Military: A soldier who just returned from overseas duty was performing stunts on his motorcycle in the garage of the barracks and lost control and collided with a sign post. His comrades have called you as the medical response.

History

S— "I can't feel anything. I can't move."
A— None.
M— None.
P— None.
L— 4 hours ago.
E— "I was showing my friends my stunts and lost control."

Injuries

1. Spinal cord injury.
2. Compound fracture of right tibia.
3. Closed deformity of left tibia.
4. Swelling and tenderness at base of neck.

Patient Instructions

You should complain of pain when your neck is examined. You can flex your arms at the elbows but have a weak grip with your hands. Otherwise you are unable to move.

Moulage Instructions

The patient should wear a full face motorcycle helmet.

Instructor Information

Scene size-up— The police are on scene and the scene is safe. There is 1 patient.

Initial assessment

General impression— The patient is found supine lying on the grass next to the road. The patient is wearing a motorcycle helmet. You note the patient has a deformity on both lower legs. The patient states, "I can't feel anything."
LOC— Alert.
Delegate spine— Direct team member to apply SMR and remove helmet.
Airway— Clear and open.
Breathing— Normal rate; very shallow, diaphragmatic breathing only.
Ventilation instructions— Direct team member to assist ventilations.
Circulation
Pulses— Normal radial pulse.
Bleeding— None.
Skin color, condition, and temperature— Normal color, warm and dry.

Decision— Rapid trauma survey due to mechanism and initial assessment.

Rapid trauma survey

Head— No sign of trauma (the patient was wearing a helmet_.
Neck— Swelling and tenderness at the base of the neck.
Trachea— Midline.
Neck veins— Flat.
Chest — Expose.
Looking— No injuries noted. Patient is using the diaphragm to breathe.
Feeling— No injuries noted. No sensation.
Listening— Breath sounds present and equal.
Percussion— Normal.
Abdomen— Expose. No obvious injury. Soft.
Pelvis— Stable to palpation. No sensation.
Extremities
Upper— No injuries noted on arms. Weak grip bilaterally. Good distal pulses.
Lower— Compound fracture to the right tibia, closed fracture to left tibia. No movement or sensation to lower legs. Good distal pulses. Direct member to cover and stabilize right tibia and stabilize left tibia.
Exam of posterior— No injuries noted. No movement or sensation.
History— (obtain from the patient)

Decision— Unstable patient, load and go. Direct member to strap legs together. Ensure that the posterior is checked during the move. Oxygen with assisted ventilations, start 2 large bore IVs en route but run fluid at a rate to maintain a radial pulse. Notify the hospital immediately that you have a conscious patient with spinal deficits, a compound tibia fracture which is covered and stabilized, and a left tibia deformity which is stabilized.

Reassessment exam

Vital signs— BP 70/50, pulse 72, respiratory rate 12 and very shallow if not assisted. Pulse ox reading 92.

Neurological

LOC— Alert.

Pupils— 4 mm, equal, and reactive.

Sensory— No sensation.

Motor—No motor.

GCS— 15.

Airway— Clear and open.

Breathing—Unchanged. Continue ventilations.

Circulation

Blood pressure— 80/60 if fluids given.

Pulses— 80.

Skin color, condition, and temperature— Normal color, warm and dry.

Neck— No injuries noted.

Trachea— Midline.

Neck veins— Flat.

Chest— No injuries noted.

Abdomen— No injuries noted.

Focused assessment of injuries

1. Spinal cord injury.
2. Compound fracture of right tibia.
3. Closed deformity of left tibia.
4. Swelling and tenderness at base of neck.

Check interventions

Secondary survey

History— SAMPLE history from patient if not already done.

Vital signs— BP 80/60, pulse 70, respirations 12 with assisted ventilations.

Neurological

LOC— Alert.

Pupils— 4 mm, equal and reactive.

Sensory— None.

Motor— None.

GCS— 15.

Fingerstick glucose— NA.

$ETCO_2$— 20 mmHg, waveform square.

Head— No injuries noted.

Airway— Clear.

Breathing— No injuries noted. Assisted ventilations.

Neck— Still tenderness and swelling to the base of the neck.

Trachea— Midline.

Neck veins—Flat.

Circulation— Radial pulse present; skin normal color, warm and dry.

Chest

Looking— No injuries noted, still only diaphragmatic breathing.

Feeling— No injuries noted, no sensation.

Listening— Breath sounds equal and clear bilaterally, normal heart sounds.

Percussion— NA.

Abdomen— No injuries noted.

Pelvis— No injuries noted.

Extremities

Upper— No injuries noted on arms. Weak grip bilaterally. Good distal pulses.

Lower— Open fracture to the right tibia, closed deformity to left tibia. No movement or sensation to legs. Good distal pulses. Dressings and stabilize right tibia and stabilize left tibia.

Interventions

Consider antibiotic for open fracture while en route to hospital if time permits.

Due to nature of possible spinal injury, analgesics are not necessary.

Scene Size Up	
Standard Precautions	Gloves. Goggles.
Scene Hazards	None.
Number of Patients	One.
Need for more help or equipment	The police are on scene and can assist.
Mechanism of Injury	The patient was performing stunts on his motorcycle, lost control and collided with a sign post. Police called for EMS.

Initial Assessment	
General Impression - Age, sex, position - Patient activity - Obvious bleeding?	Patient is found supine lying on the grass next to the road. The patient is wearing a motorcycle helmet. You note the patient has deformity on both lower legs. The patient states, "I can't feel anything."
LOC (AVPU)	Alert.
Delegate Spine	Direct team member to apply SMR. Remove helmet.
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open.
Breathing - Rate, Depth, Effort	Normal rate; extremely shallow, diaphragmatic breathing only. Direct member to assist ventilations.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp - Deadly bleeding?	Normal radial pulse. Normal, warm and dry. None.

Rapid Trauma Survey	
Head - DCAP-BLS-TIC - Fluid leaks (ears / nose) - Raccoon Eyes - Battle's Signs	No sign of trauma (was wearing helmet). No. No. No.
Neck - DCAP-BLS-TIC - Tracheal Deviation - JVD - Collar once checked	Swelling and tenderness at base of neck. Midline. Flat neck veins. Direct team member to apply.
Chest - Expose. - DCAP-BLS-TIC	Expose chest. No injuries noted. Patient is using diaphragm to breath.
Breath Sounds (2 points)	Present and equal.
Abdomen - Expose. - DCAP-BLS-TIC - Rigidity or distention	Expose abdomen. No injuries. No sensation. Soft.
Pelvis (DCAP-BLS-TIC)	Stable to palpation. No sensation.
Lower Extremities - DCAP-BLS-TIC - Distal PMS	Compound fracture to right tibia, closed fracture to left tibia. Good distal pulse. Direct member to cover wound on right tibia and stabilize both tibias. No sensation or movement.
Upper Extremities - DCAP-BLS-TIC - Distal PMS	No injuries detected. Weak grips bilaterally. Good distal circulation.

Transport Decision / Packaging / Notification	
Transport Decision	Unstable, load and go.
Packaging	Direct member to strap legs together. Ensure posterior is checked during move. No injuries noted. No movement or sensation.
Notification	Notify hospital immediately. Note that you have a conscious patient with spinal deficits and a compound tibia fracture.

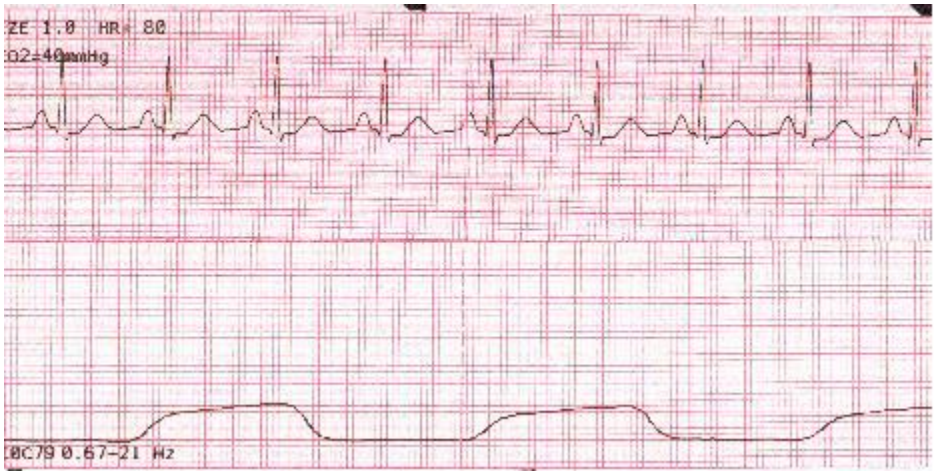
Reassessment Exam (every 5 minutes for unstable pt)	
LOC (AVPU)	Alert. Still no feeling from neck down.
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open.
Breathing - Rate, Depth, Effort	Unchanged. Continue ventilations.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp	Radial pulse present. Normal, warm, dry. * Change
Reassess Vital Signs	BP 80/60 if fluids given. Pulse 80.
Reassess Neck	No change.
Reassess Chest	No change.
Reassess Abdomen	No change.
Reassess interventions	Ensure ventilations remain effective.

Secondary Survey	
History - Signs & Symptoms - Allergies - Medications - Past Medical History - Last Oral Intake - Events	 "I can't feel anything. I can't move". None. None. None. 4 hours ago. "I was showing my friends my stunts and lost control."
Vital Signs - Blood pressure - Heart rate / quality - Resp rate / quality - Initial ETCO2 - Waveform - SPO2 - Capillary blood glucose - LOC / GCS - Skin - Pupils	 80/60. 70. 12, very shallow if not assisted. 20. Square. No capture. NA. 4/5/6 = 15. Normal, warm, dry skin. 4 mm, equal and reactive. Note: It is acceptable to initiate IV access at this time, and bolus if needed.
Head to Toe - Head - Neck - Chest - Breath sounds - Abdomen - Pelvis - Lower extremities - Upper extremities	 No injuries noted. Tender at base of neck. No injuries detected. Still only diaphragmatic breathing. No injuries noted. No injuries noted. Unchanged from above. Good distal circ. No injuries noted. Good distal circulation.

SCENARIO 7 CAPNOGRAPH & ECG

Initial $ETCO_2$: 20
Waveform: Square

This spinal shock scenario is also a perfusion issue.



SCENARIO 8

Setting

EMS/Prehospital: You have been called to a house fire caused by a gas explosion. The patient is lying on the ground, just outside the front doorway. He was pulled out of the house by a neighbor.

Occupational Health/Industrial: You have been called to a factory fire caused by a gas explosion in one of the process plants. The patient is lying on the ground just outside the front doorway of the process plant room. He was pulled out of the house by a co-worker.

Military: You have been called to a fire aboard a ship caused by an explosion in the engine room. The patient is lying on the deck just outside the forward hatch to the engine room. He was pulled out of the engine room by a shipmate.

History

S— "I have burned my face. It hurts. I can't feel anything from the neck down."
A— None known.
M— None.
P— Patient states he is healthy.
L— 6 hours ago.
E— "I opened the door, and the flames burned me and threw me backward onto the ground."

Injuries

1. Facial burns, singed nasal hairs, red burns at nose and mouth, burns inside mouth.
2. Blistering burns of anterior neck, chest, abdomen and upper arms.
3. Cervical spine injury.

Patient Instructions

You have a hoarse voice and state "My face is burning!" Also state that you cannot move.

Moulage Instructions

Apply burn moulage to face, neck, chest, abdomen, and upper arms.

Instructor Information

Scene size-up— One patient. Emergency rescue has been performed by bystanders. Fire department is already on scene when you and your partner arrive.

Initial assessment

General impression— A man is lying on the ground, yelling "My face is burning." The patient's clothes are burned and smoldering.

LOC— Alert.

Delegate spine— Direct team member to apply SMR.

Airway— Open. Burns visible in the mouth. Patient has a hoarse voice and is complaining that his face is burning. Red burns are noted at the nose and mouth, as are singed nasal hairs.

Breathing— Shallow respirations at a normal rate.

Ventilation instructions— Direct team member to apply high-flow oxygen via non rebreather mask.

Circulation

Pulses— Present, normal rate.

Bleeding— None noted.

Skin color, condition, and temperature— Normal color, warm and dry where not burned.

Decision— Rapid trauma survey due to mechanism and facial burns.

Rapid trauma survey

Head— Facial burns, singed nasal hairs, burns inside the mouth.

Neck— Blistering burns of anterior neck. Tenderness to cervical spine with step off deformity mid cervical spine.

Trachea— Midline.

Neck veins— Flat.

Chest

Looking— Burns on anterior chest.

Feeling— Diaphragmatic breathing.

Listening— Breath sounds clear bilaterally. Normal heart sounds.

Percussion— Stable.

Abdomen— Burns on anterior surface. Soft, no tenderness.

Pelvis— Stable.

Extremities

Upper — Burns on anterior surface of arms. No movement or sensation. Good distal pulses.

Lower— No sign of trauma. No movement or sensation. Good distal pulses.

Exam of posterior— No findings.

Decision— Load and go, watch for airway compromise, consider the need for intubation. Cool burns for 1-2 minutes and cover with a clean sheet. Insert two IV lines with fluid at a controlled rate. Notify hospital that the patient has facial and airway burns and a cervical spine injury. Given LOC, drug assisted intubation is necessary (if in scope of practice). Consider analgesia once transport begun.

Reassessment exam

History— (obtain from the patient).

Vital signs— BP 70/40, pulse 65, RR 12.

Neurological

LOC— Alert.

Pupils— Equal and reactive.

Sensory— None below neck.

Motor— None below neck, diaphragmatic breathing.

GCS— Unchanged. 15 (4/5/6).

Subjective changes— Ask the patient how he is feeling.

Airway— In addition to the hoarse voice noted previously, the patient now has stridor with respirations.

Breathing—Normal rate. Diaphragmatic breathing.

Circulation

Blood pressure— 80/60 after fluids.

Pulses— 65 after fluids.

Skin color, condition, and temperature— Normal color, warm and dry where not burned.

Neck

Trachea— No change.

Neck veins— No change.

Chest— No change.

Abdomen—No change.

Focused assessment of injuries

1. Facial burns, singed nasal hairs, red burns at nose and mouth, and burns inside mouth.
2. Blistering burns of anterior neck, chest, abdomen and upper arms.
3. Cervical spine injury.

Secondary survey

History and vital signs— As above.

Neurological

LOC— Unresponsive due to intubation.

Pupils— Equal and reactive.

Sensory— None below the neck.

Motor— None below the neck.

GCS— 3 due to intubation.

Fingerstick glucose— 6.7 mmol/l (120 mg/dl).

$ETCO_2$— 20, waveform sloped inspiratory downstroke.

Head— Unchanged.
Airway— Intubated.
Breathing— Assisted at 10 -12/ minute.
Neck—Unchanged.
Trachea— Midline.
Neck veins— Flat.
Circulation— Skin warm and dry.
Chest
Looking— No change.
Feeling— No change.
Listening— No change.
Percussion—Normal
Abdomen— No change.
Pelvis— No change.
Extremities
Upper— No change.
Lower— No change.

ITLS Scenario 8 – Explosion at Fire (Burns with Airway Compromise)

Scene Size Up	
Standard Precautions	Gloves. Goggles.
Scene Hazards	None.
Number of Patients	One.
Need for more help or equipment	You and your partner arrive on scene shortly after the fire department.
Mechanism of Injury	You have been called to a fire caused by an explosion. The patient is lying on the ground just outside the front doorway after bystanders pulled them to safety.

↓

Initial Assessment	
General Impression - Age, sex, position - Patient activity - Obvious Bleeding?	A male patient is lying on the ground, yelling "My face is burning!" The patient's clothes are burned and smoldering.
LOC (AVPU)	Alert
Delegate Spine	Direct team member to apply SMR.
Airway - Snoring? Gurgling? Stridor? Silence?	Open. Patient has a hoarse voice, and is complaining that his face is burning. Red burns are noted at nose and mouth. Singed nasal hairs.
Breathing - Rate, Depth, Effort	Shallow but normal rate. Direct team member to apply high flow O2 via NRB.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp - Deadly bleeding?	Present, rate seems normal. Normal, warm, dry (in unburned areas). No major bleeding observed.

↓

Rapid Trauma Survey	
Head - DCAP-BLS-TIC - Fluid leaks (ears / nose) - Raccoon Eyes - Battle's Signs	Facial burns, singed nasal hairs, burns inside mouth. No fluid leaks, raccoon eyes, or battle's signs noted.
Neck - DCAP-BLS-TIC - Tracheal Deviation - JVD - Collar once checked	Tenderness to cervical spine with step-off deformity. Blistering burns of the anterior neck. Midline. Flat neck veins. Direct team member to apply.
Chest - Expose. - DCAP-BLS-TIC	Expose chest. Diaphragmatic breathing. Burns on anterior chest.
Breath Sounds (2 points)	Clear air entry bilaterally.
Abdomen - Expose. - DCAP-BLS-TIC - Rigidity or distention	Expose abdomen. Burns on anterior surface. Soft, no tenderness.
Pelvis (DCAP-BLS-TIC)	Stable.
Lower Extremities - DCAP-BLS-TIC - Distal PMS	No sign of trauma. No movement / sensation, good distal circ.
Upper Extremities - DCAP-BLS-TIC - Distal PMS	Obvious burns on anterior surface. No movement / sensation, good distal circ.

Transport Decision / Packaging / Notification	
Transport Decision	Unstable, load and go.
Packaging	Cool burns for 1-2 minutes. Cover with clean sheet. Check posterior during roll onto board. No obvious injury.
Notification	Notify hospital immediately. Note that patient has facial and airway burns.

↓

Reassessment Exam (every 5 minutes for unstable pt)	
LOC (AVPU)	Alert
Airway - Snoring? Gurgling? Stridor? Silence?	Stridor is noted with respirations. Hoarse when speaking.
Breathing - Rate, Depth, Effort	Diaphragmatic. Shallow, normal rate.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp	Present, rate seems normal. Normal, warm, dry (in unburned areas).
Reassess Vital Signs	* In repeat Reassessment exams: BP 80/60, pulse 65 (after fluids).
Reassess Neck	No change.
Reassess Chest	No change.
Reassess Abdomen	No change.
Reassess interventions	No ongoing interventions. Patient requires intubation secondary to stridor.

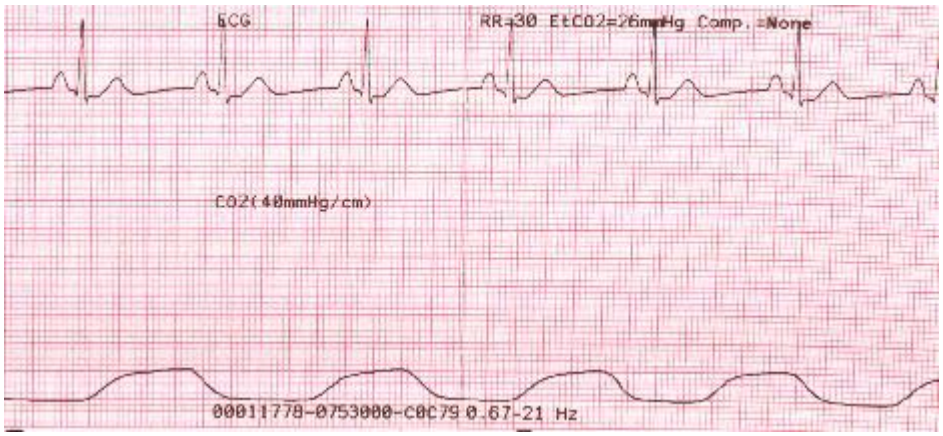
↓

Secondary Survey	
History - Signs & Symptoms - Allergies - Medications - Past Medical History - Last Oral Intake - Events	"I have burned my face. It hurts. I cannot feel anything from the neck down." None. None. Patient states healthy. 6 hours ago. "I opened the door and the flames burned me and threw me backward onto the ground."
Vital Signs - Blood pressure - Heart rate / quality - Resp rate / quality - Initial ETCO2 - Waveform - SPO2 - Fingerstick glucose - LOC / GCS - Skin - Pupils	80/65. 65. 12, with assisted ventilations. 20. Sloped inspiratory downstroke. No capture. 6.7 mmol/L (120 mg/dl). Unresponsive, GCS 3 due to DAI. Normal, warm, dry (in unburned areas) Equal and reactive Note: It is acceptable to initiate IV access and treat the hypovolemia (N/S bolus) at this time.
Head to Toe - Head - Neck - Chest - Breath sounds - Abdomen - Pelvis - Lower extremities - Upper extremities	Unchanged. Unchanged. Anterior chest burns. Intubated. No sign of trauma. As before. As before. Left forearm fracture.

SCENARIO 8 CAPNOGRAPH & ECG

Initial $ETCO_2$: 20
Waveform: Sloped inspiratory downstroke

This is a case of shock so the $ETCO_2$ would be low; however, the waveform will have a pronounced slur in the respiratory downstroke due to severe upper airway swelling. If the patient is intubated, the $ETCO_2$ remains the same as long as they are hypotensive, but the waveform will be square on successful intubation or cricothyrotomy.



SCENARIO 9

Setting

EMS/Prehospital: A cyclist was hit by a support vehicle after he lost control of his bicycle in a cycle race. The support vehicle ran over the cyclist. The cyclist is lying on the road.

Occupational Health/Industrial: You have been covering a charity cycle race by workers from your factory. A cyclist was hit by a support vehicle after he lost control of his bicycle. The support vehicle ran over the cyclist. The cyclist is lying on the road.

Military: You have been called to the airfield ramp. A ground crew was hit by a pallet loader after the driver lost control. The pallet loader ran over the crew member. The crew member is lying on the tarmac.

History

S— Patient moans in pain.
A— Unknown.
M— Unknown.
P— Unknown.
L— Unknown.
E— Patient run over by a large vehicle. He may have hit his head.

Injuries

1. Unstable pelvic fracture.
2. Closed head injury.
3. Shock.

Patient Instructions

You should moan when pelvis palpated. Otherwise do not respond.

Moulage Instructions

Put large bruises/hematoma to lower abdomen/pelvis. Make patient appear very pale and shocked. Abrasions and contusion to forehead.

Instructor Information

Scene size-up— There is 1 patient and he is lying on the road. Police are on the scene.

Initial assessment

General impression— Patient is lying still on the ground.
LOC— Moans to pain.
Delegate spine—Direct team member to apply SMR.
Airway— Clear and open. Patient has a gag reflex present.
Breathing— Rapid breathing. Normal depth.
Ventilation instructions— High-flow oxygen via non rebreather mask.
Circulation
Pulses— Rapid carotid pulse, no radial pulse present.
Bleeding— No external bleeding.
Skin color, condition, and temperature— Pale, cold and clammy.

Decision— Rapid trauma survey due to the mechanism and injuries.

Rapid trauma survey

Head— Abrasions and contusion to forehead.
Neck— No obvious injury.
Trachea— Midline.
Neck veins— Flat.
Chest
Looking— No obvious injury.
Feeling— No obvious injury.
Listening— Breath sounds and heart tones normal.
Percussion—Normal.
Abdomen— Contusion anterior above pelvis.
Pelvis— Unstable to palpation.
Extremities
Lower— Good distal pulses.
Upper— No obvious injuries. Good distal pulses.
Exam of posterior— No obvious injury.

Decision – Patient is unstable and load and go. Notify the hospital that you have a patient in shock with a closed head injury and unstable pelvic fracture. Place pelvic binder or sheet or internally rotate ankles and secure to close the “open book.”

Reassessment exam

History (obtain from the bystanders).

Neurological

LOC— Localizes to pain.

Pupils— Equal and sluggishly reactive.

Sensory— Localizes to pain.

Motor— Localizes to pain.

GCS— 8 (2/1/5).

Airway— Clear and open with oral airway.

Breathing— Increased rate. Normal depth.

Circulation

Blood pressure— BP 90/65, pulse 130 if fluids given. BP 80/50, pulse 150 if no fluids given.

Pulses— No radial pulse.

Skin color, condition, and temperature— Pale, cold, clammy.

Neck

Trachea— No change.

Neck veins— No change.

Chest— No change.

Abdomen— No change.

Focused assessment of injuries

1. Pelvic fracture.
2. Closed head injury.
3. Shock.

Check interventions

Secondary survey

History and vital signs— As above.

Neurological

LOC— Localizes to pain.

Pupils— 4 mm bilaterally and sluggish.

Sensory— No change.

Motor— No change.

GCS— 8 (2/1/5).

Fingerstick glucose— 6.7mmol/L (120 mg/dl).

$ETCO_2$— 30, waveform square.

Head— Contusion to forehead.

Airway— Unchanged.

Breathing— Unchanged.

Neck

Trachea— Unchanged.

Neck veins— Unchanged.

Circulation— Unchanged.

Chest

Looking— Unchanged.

Feeling— Unchanged.

Listening— Unchanged.

Percussion—Normal.

Abdomen— Unchanged.

Pelvis— Should not be reassessed as it is unstable.

Extremities

Upper— Unchanged.

Lower— Unchanged.

ITLS Scenario 9 – Cyclist hit by vehicle (Pelvic fracture, Unstable)

Scene Size Up	
Standard Precautions	Gloves. Goggles.
Scene Hazards	At the scene of a cycle race, a cyclist has been hit by a vehicle and is lying on the road. Police are on the scene.
Number of Patients	One.
Need for more help or equipment	Police and fire are on scene and can assist.
Mechanism of Injury	The patient was hit by a support vehicle after he lost control of his bicycle during a cycle race. The support vehicle ran over the patient. The patient is lying on the road.

Initial Assessment	
General Impression - Age, sex, position - Patient activity - Obvious bleeding?	Patient found lying still on the ground.
LOC (AVPU)	Localizes to pain.
Delegate Spine	Direct team member to apply SMR.
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open. ** Gag reflex present if OPA attempted.
Breathing - Rate, Depth, Effort	Rapid breathing, normal depth. Direct team member to apply O2 via nonrebreather mask.
Circulation - Pulse rate / rhythm / quality - Skin color / cond / temp - Deadly bleeding?	Rapid carotid pulse, no radial. Cold and clammy skin. No external bleeding noted.

Rapid Trauma Survey	
Head - DCAP-BLS-TIC - Fluid leaks (ears / nose) - Raccoon Eyes - Battle's Signs	 Abrasion /contusion on forehead No. No. No.
Neck - DCAP-BLS-TIC - Tracheal Deviation - JVD - Collar once checked	 No obvious injury. Midline. Flat neck veins. Direct team member to apply.
Chest - Expose. - DCAP-BLS-TIC	 Expose chest. No obvious injury. Breath sounds normal, heart tone normal.
Breath Sounds (2 points)	Clear air entry bilaterally.
Abdomen - Expose. - DCAP-BLS-TIC - Rigidity or distention	 Expose abdomen. Bruises above pelvis.
Pelvis (DCAP-BLS-TIC)	Unstable.
Lower Extremities - DCAP-BLS-TIC - Distal PMS	 Good distal PMS. Patient moans when palpated
Upper Extremities - DCAP-BLS-TIC / PMS	 No injuries noted. Good distal PMS.

Transport Decision / Packaging / Notification	
Transport Decision	Unstable, load and go.
Packaging	Check posterior during roll onto board. No injuries noted.
Notification	Notify hospital immediately. Notification should include that you are en route with a patient run over by a vehicle with unstable pelvis and CHI.

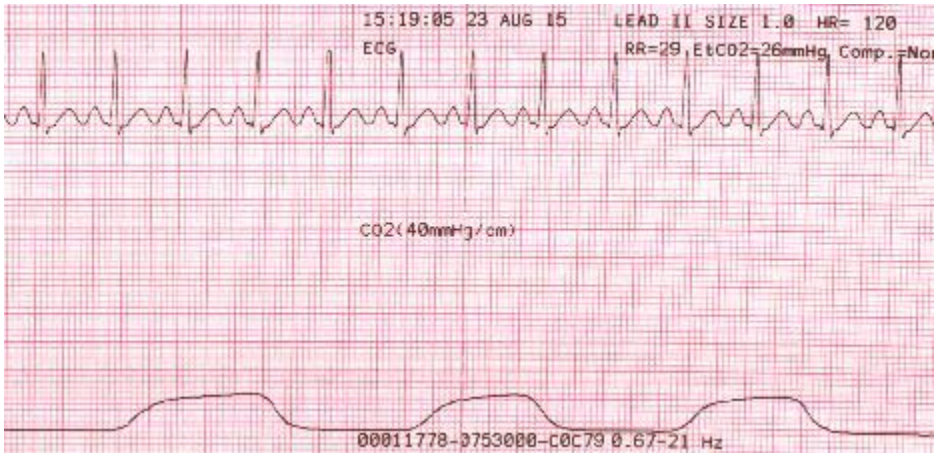
Reassessment Exam (every 5 minutes for unstable pt)	
LOC (AVPU)	Localizes to pain.
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open with oral airway.
Breathing - Rate, Depth, Effort	Fast rate and normal depth.
Circulation - Pulse rate/rhythm/quality - Skin color/cond/temp	Rapid, weak no radial pulses. Pale, cool, clammy. BP 80/50, pulse 150. No radial pulse. Direct team member to start IVs and fluids.
Reassess Vital Signs	BP 90/65, pulse 130 if fluids given.
Reassess Neck	No change.
Reassess Chest	No change.
Reassess Abdomen	No change.
Reassess Lower Extremities	More swelling.
Reassess interventions	None performed at this time.

Secondary Survey	
History - Signs & Symptoms - Allergies - Medications - Past Medical History - Last Oral Intake - Events	(from bystanders) Severe pain and mid-shaft femur swelling on both legs. Patient moans Unknown. Unknown. Unknown. Unknown. Patient was run over by large vehicle. He may have hit his head.
Vital Signs - Blood pressure - Heart rate / quality - Resp rate / quality - Initial ETCO2 - Waveform - SPO2 - Capillary blood glucose - LOC / GCS - Skin - Pupils	 80/60 130, weak at radial. 20, regular 30 Square 8% with O2 assisted. 6.7 mmol/L (120 mg/dl) 2/1/5 = 8. Pale, cool, clammy. Both 4 mm, equal and sluggish. Note: It is acceptable to initiate second IV access and treat the hypovolemia (N/S bolus) at this time. Target BP should be 100 systolic due to TBI
Head to Toe - Head - Neck - Chest - Breath sounds - Abdomen - Pelvis - Lower extremities - Upper extremities	 Laceration to forehead. No fluid leaks, no raccoon eyes or battle's signs. Unchanged. Normal. Equal air entry to bases. Unchanged. No injuries noted Stable. Bilateral femurs. No injuries noted. Good distal PMS.

SCENARIO 9 CAPNOGRAPH & ECG

Initial $ETCO_2$: 22
Waveform: Square

This is a shock scenario. As BP increases, so should the $ETCO_2$.



SCENARIO 10

Setting

EMS/Prehospital: A patient was guiding a car that was reversing into a parking space adjacent to a wall. The patient was crushed by the car when driver hit the accelerator accidentally and pinned the patient against the wall.

Occupational Health/Industrial: A worker was guiding a delivery vehicle while reversing onto the unloading dock of your factory. The worker was crushed by the truck when the driver hit the accelerator accidentally and the truck pinned the worker against the wall.

Military: An airman is guiding a delivery vehicle into the hangar when the driver hits the accelerator by accident. The airman is pinned between the truck and the wall.

History

S— Responds to pain.
A— None.
M— None.
P— Diabetic (medical alert bracelet).
L— 4 hours ago.
E— "The patient was helping to guide the driver reversing. The driver's foot slipped off the brake, crushing the patient against the wall."

Injuries

1. Basilar skull fracture.
2. Both legs crushed and mangled.
3. Fractured pelvis.
4. Abdominal injuries.

Patient Instructions

You should moan when your abdomen, pelvis, legs, and back of head are palpated.

Moulage Instructions

Patient has crushed, mangled lower legs. Both are bleeding. Battle's sign behind the right ear. Cerebrospinal fluid from right ear.

Instructor Information

Scene size-up— Scene is safe. Vehicle has been removed. Fire units are on scene and can assist. There is 1 patient.

Initial assessment

General impression— Patient is supine on the ground. The patient's eyes are closed and he is not moving. Bleeding noted from lower extremities.
LOC— Localizes to pain.
Delegate bleeding control— Direct team member to apply tourniquets.
Delegate spine— Direct team member to apply SMR.
Airway— Clear and open.
Breathing— Slow respirations with good chest movement.
Ventilation instructions— Give 100% oxygen and assist ventilations at a rate of 12-15/minute.
Circulation
Pulses— Carotid pulse weak and rapid. Radial pulse absent.
Bleeding— Severe bleeding from both legs.
Skin color, condition, and temperature— Pale, cold, clammy skin.

Decision— Rapid trauma survey due to mechanism and examination.

Rapid trauma survey

Head— Hematoma to the occiput that is tender to touch. (Patient moans.) Bruising behind right ear and bloody fluid from right ear.
Neck— No obvious injury.
Trachea— Midline.
Neck veins— Flat.
Chest
Looking— No obvious injury.
Feeling— No obvious injury.
Listening— Breath sounds equal bilaterally. (Very slow when not being ventilated.)
Percussion— Normal.
Abdomen— Tender and distended.
Pelvis— Very unstable.
Extremities
Lower— Both legs are crushed and mangled from the upper thigh to the feet. There is continued bleeding from both legs. Distal pulses slightly diminished.
Upper— No obvious injuries to the arms. Distal pulses absent and sensation present.
Exam of posterior— Minor abrasions on the back.

Decision:
Load and go due to mechanism and injuries. Patient is unstable. Should have 2 IV lines inserted en route, placed on monitor and will require intubation on route. Pelvic binder or a sheet to be applied. Both legs require tourniquets or compression bandages to control bleeding. Notify the hospital that you have an unconscious crush injury patient with pelvic, leg and abdominal injuries.

Reassessment exam

History (limited information obtained from coworkers).

Vital signs— BP 90/60, pulse 140 if fluids given. BP 80/40, pulse 160, if no fluids given.

Neurological

LOC— Localizes to pain.

Pupils— Right pupil is dilated and non-reactive. Left pupil mid position and reactive.

Sensory— Localizes to pain.

Motor— Localizes to pain.

GCS— 8 (2/1/5).

Airway— Intubated.

Breathing— Assisted ventilations at 10-12/minute.

Circulation

Blood pressure— 90/60 if fluids given. 80/40 if no fluids given.

Pulses— 140, weak radial pulse if fluids given. 160, no radial pulse if no fluids given.

Skin color, condition, and temperature— Pale, cool and clammy.

Neck

Trachea— No change.

Neck veins— No change.

Chest— No change.

Abdomen— More distended, rigid.

Focused assessment of injuries

1. Basilar skull fracture – head still draining bloody fluid from the ear.
2. Both legs crushed and mangled – bleeding controlled with tourniquets. Pulses now diminished.
3. Fractured pelvis.
4. Abdominal injuries.

Check interventions

Is bleeding controlled?

Is the oxygen hooked up and turned on?

Are IVs running at the correct rate?

ETT in trachea and ventilation rate correct?

Does patient need sedation to help protect airway?

Cardiac monitor, end tidal CO_2 and oxygen saturations?

Pelvic binding?

Secondary survey

Subjective changes— Patient is now unconscious.

History and vital signs— As above. If a second bolus is given, the BP is 100/60 and pulse 120.

$ETCO_2$— 12, waveform square.

Neurological

LOC— GCS 3 (1/1/1).

Pupils— Right pupil is dilated and non-reactive. Left pupil midpoint and reactive.

Sensory— No response.

Motor— No response.

Finger-stick glucose— 5.3 mmol/l (96 mg/dl).

Head— Battle sign behind the right ear. Bloody fluid from the right ear. Face stable . No drainage from the nose.

Airway— Intubated.

Breathing— Assisted at 10-12/minute.

Neck

Trachea— Midline.

Neck veins— Flat.

Circulation— Skin pale, cold and clammy. Bleeding controlled.

Chest

Looking— No obvious injury.

Feeling— No obvious injury.

Listening— Breath sounds equal with assisted ventilation.

Percussion— Normal.

Abdomen— Distended and rigid.

Pelvis— Do not examine again.

Extremities

Upper— No obvious injury.

Lower— Splinted and dressing.

ITLS Scenario 10 - Crush Injury by Motor Vehicle Reversing (Pelvic, Leg, Abdominal Injuries)

Scene Size Up	
Standard Precautions	Gloves. Goggles.
Scene Hazards	None. The vehicle has been removed.
Number of Patients	One.
Need for more help or equipment	Fire on scene and can assist.
Mechanism of Injury	The patient was crushed when a reversing vehicle pinned the patient against a wall.

Initial Assessment	
General Impression - Age, sex, position - Patient activity - Obvious Bleeding?	Patient is found supine on the ground. The patient's eyes are closed. There is no movement. Direct team member to control bleeding.
LOC (AVPU)	Localizes to pain.
Delegate Spine	Direct team member to apply SMR.
Airway - Snoring? Gurgling? Stridor? Silence?	Clear and open.
Breathing - Rate, Depth, Effort	Slow respirations with good chest movement.
Circulation - Pulse rate/rhythm/quality - Skin color/cond/temp - Deadly bleeding?	Radial absent, carotid weak and rapid. Pale, cold, clammy skin. Severe bleeding from both legs.

Rapid Trauma Survey	
Head - DCAP-BLS-TIC - Fluid leaks (ears / nose) - Raccoon Eyes - Bruising	 Hematoma to occiput. Patient moans when occiput is palpated. Bloody fluid from right ear. No. Behind right ear.
Neck - DCAP-BLS-TIC - Tracheal Deviation - JVD - Collar once checked	 No obvious injury. Midline. Flat neck veins. Direct team member to apply.
Chest - Expose. - DCAP-BLS-TIC	 Expose chest. No obvious injuries found.
Breath Sounds (2 points)	Present and equal. Slow when not ventilated.
Abdomen - Expose. - DCAP-BLS-TIC - Rigidity or distention	 Expose abdomen. Tender No.
Pelvis (DCAP-BLS-TIC)	Very unstable. Test only once!
Lower Extremities - DCAP-BLS-TIC - Distal PMS	Both legs are crushed and mangled from upper thigh to feet. There is continued bleeding from both legs, unless tourniquet used.(No pulses if tourniquet applied.) Distal pulses slightly diminished.
Upper Extremities - DCAP-BLS-TIC - Distal PMS	 No injuries detected. Distal pulses absent and sensation present.

Transport Decision / Packaging / Notification	
Transport Decision	Unstable, load and go.
Packaging	Ensure posterior is checked during move (minor abrasions on back).
Notification	Notify hospital immediately. Note that you have an unconscious crush injury patient with pelvic, leg and abdominal injuries.

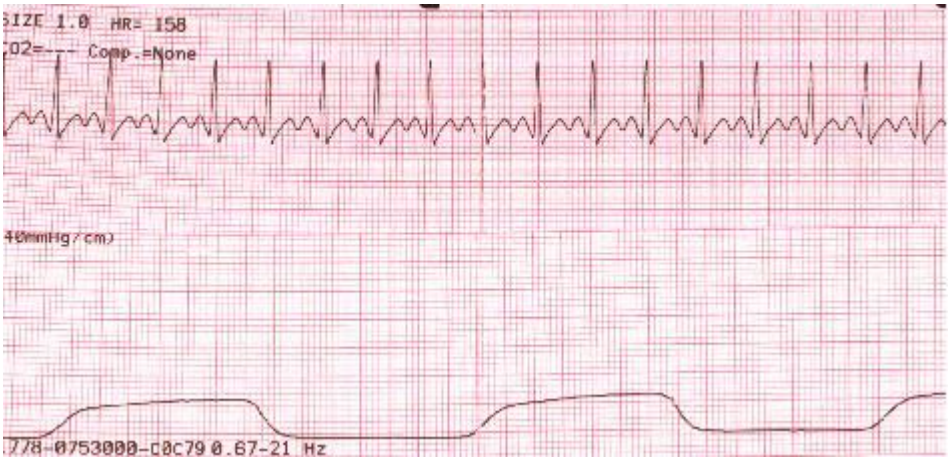
Reassessment Exam (every 5 minutes for unstable pt)	
LOC (AVPU)	Localizes to pain.
Airway - Snoring? Gurgling? Stridor? Silence?	Intubated. DAI for advanced provider.
Breathing - Rate, Depth, Effort	Assisted ventilations.
Circulation - Pulse rate/rhythm/quality - Skin color/cond/temp	Radial absent, carotid weak and rapid. Pale, cool, clammy.
Reassess Vital Signs	BP 90/60, pulse 140. BP 80/40, pulse 160 if no fluids given.
Reassess Neck	No change.
Reassess Chest	No change.
Reassess Abdomen	More distention. Rigid.
Reassess interventions	Pelvic binding. Tourniquets applied

Secondary Survey	
History - Signs & Symptoms - Allergies - Medications - Past Medical History - Last Oral Intake - Events	(from bystanders) Patient responds to pain. None. None. Diabetic medical alert bracelet. 4 hours ago. "The patient was helping to guide the driver reversing. The driver slipped off the brake, crushing the patient against the wall."
Vital Signs - Blood pressure - Heart rate / quality - Resp rate / quality - Initial ETCO2 - Waveform - SPO2 - Fingerstick glucose - LOC / GCS - Skin - Pupils	 As above. If second bolus started, BP 100/60 160, weak at radial. (Pulse 120 if second bolus started RR=18 if not 92% on O2. 12. Square No capture. 5.3 mmol/l (96 mg/dl). GCS 3. Pale, cool, clammy. Left pupil midpoint and reactive. Right pupil dilated and non-reactive. Note: It is acceptable to initiate IV access at this time, and bolus to a maximum systolic pressure of 100
Head to Toe - Head - Neck - Chest - Breath sounds - Abdomen - Pelvis - Lower extremities - Upper extremities	 Bruising behind rt ear, fluid from rt ear. No injuries. No tracheal shift or JVD. No injuries found. Breath sounds present and equal. Distended and tender. *Do not reexamine*. Splinted and dressing. Check tourniquets No obvious injury.

SCENARIO 10 CAPNOGRAPH & ECG

Initial $ETCO_2$: 12
Waveform: Square

Shock will keep the $ETCO_2$ low as long as the perfusion is low. Care must be taken not to allow hypoventilation or over-ventilation of the patient. Without good perfusion, blood will not return to the heart to be blown off. Aggressively treat hypotension.



ITLS SCENARIO GRADE SHEET (TASK ANALYSIS)

Student Name:	Date:	Scenario #:	[ ] Basic [ ] Advanced	[ ] Practice [ ] Test [ ] RT
Time Started:	Time Primary completed:	Time Transported:		Time Secondary completed:

ACTION	✓	COMMENTS
PATIENT ASSESSMENT - PRIMARY SURVEY		
Scene Size-up Standard precautions		
Scene Hazards		
Number of Patients		
Need for More Help or Equipment		
Mechanism of Injury		
General Impression Age, Sex, Weight		
General Appearance		
Body Position		
Position in Environment		
Patient Activity		
Obvious Severe Injury or Major Bleeding		
LOC AVPU		
Airway Snoring, Gurgling, Stridor, Silence		
Breathing Present? Rate, Depth, Effort		
Radial/Carotid Pulses Present? Rate, Rhythm, Quality		
Skin Color, Temp, Moisture, Capillary Refill		
Uncontrollable external hemorrhage?		
Head and Neck Major facial injuries		
Bruising, swelling, penetrations		
Subcutaneous emphysema?		
Neck vein distention?		
Tracheal deviation?		
Chest Look: Asymmetry, Contusion, Penetrations, Paradoxical Motion, Chest Rise		
Feel: Tenderness, Instability, Crepitation		
Breath Sounds Present? Equal?		
If decreased breath sounds, percussion		
Heart Tones		
Abdomen Look: bruising, penetration/evisceration		
Gently palpate: tenderness, rigidity, distention		
Pelvis Deformity, penetrating wounds, TIC		
Lower Extremities Upper: swelling, deformity, TIC		
Lower: scan wounds, swelling, deformity		
Motor, sensory before transfer to backboard		
Upper Extremities Scan wounds, swelling, deformity		
Motor, sensory before transfer to backboard		
Posterior Penetrations, deformity, edema		
IF CRITICAL, TRANSFER TO AMBULANCE		

ACTION	✓	COMMENTS
Baseline Vital Signs HR, RR, BP		
History SAMPLE		
IF ALTERED MENTAL STATUS		
Pupils Size? Reactive? Equal?		
Glasgow coma scale		
Orientation, emotional state		
Signs of cerebral herniation		
Medical identification devices		
Blood glucose		
Critical transport decision		

ACTION	✓	COMMENTS
PATIENT ASSESSMENT - REASSESSMENT EXAM		
Subjective Ask patient if changes in how feels		
Reassess mental status LOC, pupils		
If altered mental status Recheck GCS		
Reassess airway		
Reassess breathing and circulation Recheck vital signs		
Skin color, condition, temperature		
Check for neck vein distention		
Check for tracheal deviation		
Recheck chest		
Breath sounds: Quality? Equal?		
Reassess heart sounds		
Reassess abdomen - if possible injury Development of tenderness, distention, rigidity		
Check all identified injuries For example: Lacerations for bleeding PMS distal to injuries on extremities Flail segments Pneumothorax Open chest wounds		
Check all interventions For example: ET tube for patency and position Oxygen for flow rate IVs for patency and fluid rate Seals on sucking chest wounds Patency of decompression needle Splints and dressings Impaled objects for stabilization If pregnant, body position Cardiac monitor, $Sp0_2$, $ETCO_2$		

GRADE KEY: **[✓] Completed, skill performed in sequence**
[D] Delayed, performed out of sequence
[X] Skill not performed, too late or incorrectly

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ACTION	✓	COMMENTS
PATIENT ASSESSMENT - SECONDARY SURVEY		
Repeat Initial Assessment		
Repeat vital signs		
Consider Cardiac monitor, $Sp0_2$, $EtCO_2$		
LOC AVPU		
If conscious, orientation and emotional state		
If altered mental status, GCS		
If altered mental status, blood glucose		
If altered mental status, $Sp0_2$		
If altered mental status, consider naloxone		
Pupils Size, equality, response to light		
Motor Move fingers and toes?		
Sensation Feel fingers and toes?		
If unconscious, respond to pinch?		
Head DCAP-BTLS-TIC		
Raccoon eyes		
Battle's signs		
Drainage from ears or nose		
Mouth		
Reassess airway		
Neck DCAP-BTLS-TIC		
Neck vein distention?		
Tracheal deviation?		
Chest DCAP-BTLS-TIC, paradoxical movement		
Instability and crepitation		
Breath sounds Present? Equal? Quality?		
If decreased breath sounds, percussion		
Heart sounds		
Recheck wound seals, injuries		
Abdomen Signs of blunt or penetrating trauma		
Palpate all quadrants for tenderness, rigidity		
Pelvis and Extremities DCAP-BTLS-TIC		
PMS distal to injuries on extremities		
IF CRITICAL, TRANSPORT IMMEDIATELY		

	CRITICAL ACTIONS
	Completes scene size-up and uses universal precautions
	Performs initial assessment and interacts with patient
	Performs organized rapid trauma survey or focused exam
	Ensures spinal motion restriction when clinically indicated
	Ensures appropriate oxygenation and ventilation
	Recognizes and treats all life-threatening injuries
	Uses appropriate equipment and techniques
	Recognizes critical trauma, time and transport priorities
	Performs ITLS Secondary Survey (when time permits)

	IMPORTANT ACTIONS
	Performs ITLS Reassessment Exam (when time permits)
	Utilizes time efficiently
	If critical, notifies medical direction early
	Gives appropriate report to medical direction
	Demonstrates acceptable skill techniques
	Displays leadership and teamwork

	ADDITIONAL ACTIONS
	Finish bandaging and splinting after ITLS Secondary Survey (when time permits)
	Vital signs every 5 minutes for critical patents, every 15 minutes for stable
	Repeats Reassessment Exam each time patient moved or intervention performed
	Repeats Reassessment Exam if patient condition worsens
	Appropriately interacts with patient, family and bystanders
	Communicates with patients and/or bystanders

OVERALL GRADE

[ ] Proficient (IP) [ ] Competent [ ] Inadequate

Comments:

Lead Instructor Name (print):	Signature:
Instructor Name (print):	Signature:
Instructor Name (print):	Signature: