MANAGEMENT OF AN EMERGENCY SITUATION

Management of an emergency situation contains a prehospital clinical evaluation of the victim as well as a triage. It is important to remember that these approaches are taught in order to give candidates the proper tools and to prepare them to act methodically when managing emergency situations. However, depending on the gravity of the situation and the rescuer's judgement, certain steps can be inverted, if not complete omitted.

PREHOSPITAL CLINICAL EVALUATION

These are the four steps of the intervention protocol during an emergency situation (prehospital clinical evaluation)

- Rescue scene assessment
- Primary assessment
- Secondary assessment
- Treatment

RESCUE SCENE ASSESSMENT

- Wear gloves when arriving to the scene
- Evaluate the surroundings to ensure they are safe for the rescuer, the victim and the witnesses
- Identify self as rescuer (name and function)
- Obtain consent for treatment
- Verify the presence of witnesses
- Look for the causal mechanism

PRIMARY ASSESSMENT

The primary survey allows rescuers to determine if the victim's life is in danger. If a problem is detected during the primary assessment, it becomes a vital emergency for the victim. The rescuer must prioritise their actions to stabilise the problem uncovered. For example, if the position of the victim does not allow them to breath properly, which is usually the case for an unconscious victim laying on their back, the victim must either be placed in the recovery position or an aid must be asked to hold their airway open during the rest of the management in order to stabilize the problem. The acronym ABC helps the rescuer to remember the steps of the primary assessment.

The primary assessment must be done on all victims, whether they are conscious or unconscious.

- Usually, a correlation exists between the state of consciousness and the opening of the airway, depending on the victim's position (e.g. a conscious victim lying on their back will

probably have their airway partially obstructed by a collapsed tongue; this same victim, when laying on their side, will have their airway properly open). Here is an example on how to properly execute a primary assessment on a conscious victim:

- Have you suffered trauma to the head?
- Did you lose consciousness?
- Take a few large breaths.
- Does that hurt?
- Do you have difficulty breathing?

- For an unconscious victim, the opening of the airway must be done using one hand on the forehead of the victim and two fingers under their chin.

- Check breathing: visually verify if breathing is normal (5 seconds). If the victim isn't breathing, start the CPR maneuvers.

- Check circulation: if the victim is breathing, check for their pulse and for the presence of major bleeding or drippings (wet check). Looking for dripping is only done in the presence of more experienced rescuers.

The LOC+ABC (primary assessment)

LOC	Level of consciousness	Check the level of consciousness
+		Call ambulance and AED as needed
A	Airway	Clear the airways
B	Breathing	Check the breathing
C	Circulation	Check the circulation (pulse and major bleeding)

SECONDARY ASSESSMENT

The secondary assessment allows to:

- determine the source of the problem, identify injuries and potential illnesses;
- evaluate possible aggravating factors;
- determine the appropriate intervention and treatment;
- gather information that will be transmitted to the medical personnel or the EMS.

It consists of three steps:

- **The revaluation of vital signs;**
- **Head-to-toe examination;**
- **Medical history (and the circumstances of the incident).**

The vital signs

The 5 vital signs to evaluate during the secondary survey
The level of consciousness, the breathing, the pulse, the skin and the pupils. These signs must be checked every 5 to 10 minutes to validate the victim's condition: are they stable, improving or deteriorating?

The technical details of **breathing**, **pulse**, **skin** and **pupils** are detailed on page 41 of the Canadian First Aid Manual.

Taking **vital signs** during the **primary assessment** versus the **secondary assessment**:

The same vital signs are checked during the primary and secondary assessment, but are not checked using the same method nor for the same reasons.

- During the primary assessment, vital signs are only used to check if the victim is conscious, if they are breathing and if they have a pulse. Only the presence of vital signs is checked.

- Evaluation of the vital signs during the secondary assessment allows the rescuer to determine the level of consciousness of the victim, the state of their breathing, their pulse, their skin and their pupils. The secondary assessment is used to evaluate the quality and quantity of the vital signs.

Level of consciousness

A person's level of consciousness is determined by one of these four categories: alert, verbal, pain and unresponsive. The acronym AVPU allows rescuers to remember the different levels of consciousness.

AVPU – Acronym used to determine the **level of consciousness** of a victim.

A :	*Alert* :	The victim is conscious and answers questions.
V :	*Verbal* :	The victim answers verbal stimulus.
P :	*Pain* :	The victim reacts to stimulus caused by pain.
U :	*Unresponsive* :	The victim does not answer nor react – they are unconscious.

A person can be conscious, since they are able answer questions, but still be completely disoriented. This level of consciousness is an emergency for the victim. If the victim is able to answer, four questions must be asked to determine their consciousness level. These questions represent the four spheres of the consciousness level which are the place, identity, time and event. These questions are also useful when rescuers suspect a change in the victim's consciousness level, a head injury or a loss of memory. The acronym LITE helps rescuers remember which questions must be asked.

LITE – Acronym to check if a person is **alert and oriented**.

L :	Location:	Where are you?
I :	Identity:	What is your name?
T :	Time:	What day/month/year is it? (Approximate moment of the day)
E :	Event:	What happened?

Head-to-toe examination

There are four principles linked to the head-to-toe examination.

1. The examination is done in the **found position**.
    - Unless the victim cannot properly breathe in the found position, in which case always prioritize the primary assessment.
    - Avoid moving the victim before making sure there are no injuries. Caution: an injury can sometimes hide another, since the brain cannot feel pain in two different places simultaneously, because of the transmission mechanisms and pain reception. The victim will usually feel the sharpest pain. For example, a burnt hand is very painful. It is possible that the victim does not feel a leg injury because of the burn injury on their hand.

2. The examination is done **from the head to the toes**.
    - The examination must start in the parts which are the most important for the human body, i.e. the places where the consequences of injury are the most dangerous for the victim, and end where they are the least important. In other words, start with the head, the thorax, the pelvis, the legs and end with the arms.

3. The examination is done **from the ground up**.
    - Always examine the body part which is closest to the ground first. Applying pressure on the part closer to the ground (for example the back, if the victim is laying on their back) first allows to properly locate the pain. Doing the opposite can mislead the rescuer on the location of the pain.

4. When the rescuer finds an **injury**, they must **expose and stabilize** it.
    - The rescuer must always expose the injury in order to apply the correct treatment. For example, a rescuer cannot treat an injury located under a shirt. They must remove the shirt, if possible, to see the injury. They must always ask the victim's permission and respect their decision. Always avoid cutting a piece of clothing. However, certain emergency situations force rescuers to cut a piece of clothing in order to expose and evaluate an injury.
    - Once the injury is exposed, the rescuer must apply first aid in order to stabilize the wound. Stabilizing means applying primary treatment to an injury. For example, for bleeding, the victim must be given a gauze and asked to apply pressure themselves. For a bone or joint injury, ask the victim not to move, and make sure they are holding their injured member in a comfortable position. If they cannot hold their injured member, like their leg, ask a witness to come and hold the injured leg in the found position.
    - Once the injury stabilized, the rescuer must continue their assessment to expose all of the victim's injury.
    - When all of the victim's injuries are exposed and stabilized, they must be treated according to the priorities.

Medical history (and circumstances of the incident)

It is important to quickly ask the victim questions about their medical history and the circumstances of the incident, especially in situations where the victim is at risk of losing consciousness.

This step is divided into two sets of questions, the first one being the victim's medical history and the second being the circumstances of the incident. Note that in the Lifesaving Society's Emergency Care program lessons, candidates will only be evaluated on questions to ask concerning the medical history (SAMPLE).

The victim's medical history can be verified using the acronym SAMPLE.

SAMPLE acronym (medical history)

S : Signs and symptoms*	Check the observable signs on the victim. Ask the victims what they are feeling (symptoms).
A : Allergies	Does the victim have severe allergies? Does the victim have inconvenient allergies?
M : Medications	Does the victim take medication with or without prescription? Does the victim take drugs? Does the victim take natural products? Is the dose taken on a regular or temporary basis? Has the dose been taken recently or has it been forgotten? Is it a new or old dose?
P : Past illnesses	Is the victim suffering from an illness? Have they undergone a significant surgical procedure?
L : Last Oral Intake	When did the victim last ingest a solid or liquid food? What quantity has been ingested? Has the food been properly digested?
E : Events leading up to present injury	What is the source of the current problem? What was the victim doing before and after the incident?

The SAMPLE is also used as is by emergency personnel, it is thus important to transmit the information that has been found.

*It is important to distinguish signs and symptoms: a sign is what the rescuer sees; a symptom is what the victim feels.

The circumstances of the incident can be verified using the acronym *OPQRST*.[1]

OPQRST acronym (circumstances of the incident)

O: Onset	How did the signs and symptoms begin and what was the first sign?
P: Provocation	What caused the symptoms?
Q: Quality	How would you describe the symptoms?
R: Radiation	Where do the signs and symptoms irradiate?
S: Severity	Rate the pain from 0 to 10. Are the symptoms more serious than usual?
T: Time	At what time did the first symptoms appear?

Source : *Guide de l'étudiant premiers répondants,* module 11, p. 10

The OPQRST is also used by first responders to collect data specific to the victim's injuries and to the circumstances of the incident.

TREATMENT

There are two types of treatment:

- specific treatment;
- continuous treatment.

Specific treatments are treatments that have the highest priority for the rescuer, once the injuries are exposed and stabilized. **Continuous** treatments are treatments which must be made throughout the victim's management. The acronym WARTS can be used to remember continuous treatments.

WARTS acronym (continuous treatments)

W : Warmth
A : ABCs – loosen clothing, monitor vital signs
R : Rest and reassurance
T : Treatment – treat for cause of shock
S : Semi-prone (recovery) position

[1] It is important to remember that OPQRST is information that can be transmitted to EMS. However, this information is not required; as a result, candidates do not have to practice or master this subject.

TRANSFERING INFORMATION TO PARAMEDICS

When the ambulance paramedics arrive on the scene, they must gather certain information before they can leave and bring the victim to the hospital. The faster the information is gathered, the faster the victim can be hospitalized. The information to be transmitted to paramedics are summarized with the acronym CHARTE[2].

CHARTE acronym

	Medical case	Trauma
C : Chief complaint	What is the victim complaining about and since when? Use the victim's vocabulary.	Time of incident; Position before the incident; Security measures; Trauma biomechanics; Velocity, type and number of impacts; Deformations, intrusions, projections, etc.
H : History	During the first contact with the victim : - What was their level of consciousness? (AVPU) - What was the victim's position?	
A : Assessment	Note the victim's signs and symptoms. Indicate the results of the victim's survey for: - The physical exam; - The vital signs.	
R : Rx and past medical hx	Indicate the medication taken by the victim (including assistance to medication administration) - Hour and dose; - Frequency of administration; - History and allergies; - Prescribed medication.	
T : Transportation and treatment	During your presence, was there any change to the victim's state? What treatments did you administer to the victim?	
E : Events	Child protection cases Environment is unsanitary, difficult to access, etc.	Incarceration Others

Source : *Guide de l'étudiant premiers répondants,* module 11, p.11

[2] It is important to remember that CHARTE is information that can be transmitted to EMS. However, this information is not required; as a result, candidates do not have to practice or master this subject.

TRIAGE[3]

If there are many victims, the first respondent must recognize and evaluate the situation in order to establish victim priorities; this step is called triage. They can then establish contact with the victim who is the most severely injured.

Triage serves to establish a logical order for treating the victims. In other words, it serves to identify victims who must receive treatment as fast as possible. The most renowned triage method is the START method (Simple Triage and Rapid Treatment). This method is very close to the primary assessment.

First category emergencies are treated in priority. These are injuries that cause harm to vital functions:

- breathing problems;
- heart problems;
- uncontrollable bleeding;
- open wounds on the abdomen or the thorax;
- important medical problem (diabetes with complication, poisoning, etc.).

Second category emergencies require treatments that can be delayed for a few minutes. These are injuries to the head and the spine, burns, and fractures.

Third category emergencies do not require important treatments. These are minor bleeding, joint injuries and death.

The START method

With this method, the victims are classified according to four categories:

Red
The injured person is in mortal danger but has reasonable chances to survive.

Yellow
The injured person can tolerate a minimal wait before being evacuated without putting their life in immediate danger.

Green
The injured person is up and about and can tolerate a prolonged wait, depending on available resources.

Black
The person is dead or has no chance of surviving. Caution, only a medical doctor can attest to the death of a victim.

In case of discrepancy between the original and the translation, the original version in French will prevail.

[3] It is important to remember that triage is information that can be transmitted to EMS. However, this information is not required; as a result, candidates do not have to practice or master this subject.