

# **Assessments**

**EMS Continuing Education  
Technician through Technician-Advanced Paramedic**

**Consistent with the  
National Occupational Competency Profiles  
as developed by  
Paramedic Association of Canada  
and  
“An Alternate Route to Maintenance of Licensure”  
as developed by Manitoba Health**

**Evaluated for content by:  
Pending**

**Developed by:  
Educational Subcommittee – Paramedic Association  
of Manitoba**

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## **Disclaimer**

These documents were developed for improved accessibility to standardized continuing education for all paramedics in Manitoba.

This training package is consistent with the National Occupational Competency Profiles and the core competency requirements (both mandatory and optional) as identified in “An Alternative Route to Maintenance of Licensure” (ARML). It is not the intent that this package be used as a stand-alone teaching tool. It is understood that the user has prior learning in this subject area, and that this document is strictly for supplemental continuing medical education. To this end, the Paramedic Association of Manitoba assumes no responsibility for the completeness of information contained within this package.

It is neither the intent of this package to supersede local or provincial protocols, nor to assume responsibility for patient care issues pertaining to the information found herein. Always follow local or provincial guidelines in the care and treatment of any patient.

This package can be used in conjunction with accepted models for education delivery and assessment as outlined in “An Alternative Route to Maintenance of Licensure”. Any individual paramedics wishing to use these continuing education packages to augment their ARML program should contact their local EMS Director.

This document was designed to encompass all licensed training levels in the province (Technician, Technician – Paramedic, Technician – Advanced Paramedic.). Paramedics are encouraged to read beyond their training levels. However, it is suggested that the accompanying written test only be administered at the paramedic’s current level of practice.

This package has been reviewed by the Paramedic Association of Manitoba’s Educational Subcommittee and is subject to review by physician(s) or expert(s) in the field for content.

As the industry of EMS is as dynamic as individual patient care, the profession is constantly evolving to deliver enhanced patient care through education and standards. The Paramedic Association of Manitoba would like to thank those practitioners instrumental in the creation, distribution, and maintenance of these packages. Through your efforts, our patient care improves.

This document will be amended in as timely a manner as possible to reflect changes to the National Occupational Competency Profiles, provincial protocols/Emergency Treatment Guidelines, or the Cognitive Elements outlined in the Alternate Route document.

Any comments, suggestions, errors, omissions, or questions regarding this document may be referred to [info@paramedicsofmanitoba.ca](mailto:info@paramedicsofmanitoba.ca) , attention Director of Education and Standards.

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## **Introduction**

This module deals with patient assessments. Components of this document include:

- Scene assessment
- Triage
- Initial assessment
- Rapid assessments
- Focused history
- Detailed assessment
- Focused systems assessment
- Ongoing assessment
- Determination of death
- Communication and documentation

The Alternate Route to Maintenance of Licensure and older educational programs used terminology such as primary and secondary surveys when discussing assessment technique. Due to the fact that revised training programs no longer use this terminology, but rather use the BTLS approach to patient assessments, that will be the model followed here.

### **Conventions Used in this Manual**

The cognitive elements contained in this training module apply to all EMS licensure levels. Therefore no conventions have been used to differentiate between Technician, Technician - Paramedic or Technician – Advanced Paramedic.

## **Assessments**

From a practical point of view, prehospital emergency care is simply a series of decisions about treatment and transport. The process that guides decision-making in EMS is based on your patient assessment findings.

### **Patient assessment has several main purposes:**

- To determine whether the patient is injured or has a medical illness.
- To identify and immediately manage life-threatening injuries & conditions.
- To determine priorities for further assessment and care on the scene vs. immediate transport with assessment and care continuing en route.
- To examine the patient and gather a patient history and provide further emergency care.
- To monitor the patient's condition; and
- To communicate patient information to the medical facility staff and to document the details of the call.

### **The components of patient assessment include:**

- Scene size-up
- Initial assessment
- Rapid assessment
- Focused / Detailed physical assessment
- Focused history
- Ongoing assessment.

## **Scene Size-Up**

Scene size-up is a quick assessment of the incident location and surroundings that will provide you and your partner with as much information as possible about the safety of the scene, mechanism of injury, and the nature of the illness before you enter and begin patient care. Your first step at any scene is to make sure that you and your partner are safe. Never become a victim yourself.

### **Components of the Scene Size-Up**

#### *Dispatch Information and Mental Preparation*

You should begin the assessment process long before you actually make contact with the patient. This pre arrival assessment process includes using information that you received from dispatch, as well as preparing yourself mentally to handle the call. Therefore, your

first step on any call is to evaluate whatever dispatch information is available, including the location, the nature of the call, and the age and gender of the patient(s). While not always completely accurate, dispatch information may provide some insight into the following questions:

- What is the nature of the call, and has EMS responded to this location before?
- What are the likely problems based on the patient's age or gender?
- What equipment or additional personnel and resources might be needed?
- What are the potential hazards?

### **Safety of the Scene**

- Make sure you and your partner are safe:
  - Reduce your risk of exposure to communicable disease by following Routine Practices (BSI).
  - Watch for possible dangers outside the ambulance, such as traffic, leaking fuel, downed electrical lines, fire, and hazardous materials.
  - Consider your ambulance to be a relatively safe haven if you are responding to a crime scene
- Make sure the patient and bystanders are safe:
  - Move bystanders to a safe area.
  - Ask bystanders to help with or perform a specific task.
  - Ask for more help if you need it.

### **Nature of the Illness/Chief Complaint**

- Ask the patient, family members, bystanders or law enforcement why EMS was called.

### **Mechanism of Injury / Kinematics of Trauma**

- Use the mechanism of injury as a guide to predict the potential for serious injury:
  - How much force was applied to the body?
  - How long was the force applied?
  - What type of force was applied to the body? (i.e. electrical, distance, velocity and mass).
  - What area of the body was involved?
  - Consider the need for c-spine control.



*With traumatic injuries, the patient has been exposed to some force or energy that results in injury or even possibly death. You can learn a great deal about that force by simply looking at the mechanism of injury.*

### **Multiple Patients**

- Determine the number of patients
- Call for additional EMS units if required
- Begin triage

Call for additional resources, such as law enforcement, the fire department, rescue units, HazMat teams, and utility companies

### **Triage**

Triage is a process of identifying the severity of each patient's condition. Once that is accomplished, you can begin to establish treatment and transport priorities. One attendant, usually the most experienced, should be assigned to perform triage. This process will help you to allocate your personnel and equipment resources most effectively and efficiently in a multiple-patient situation. If there is a large number of patients or if patient needs are greater than the available resources, put your local mass-casualty plan into action.



*With multiple patients, you should call for additional resources and then begin triage.*

### **Four General Priority Categories Used for Triage:**

- |                                       |   |
|---------------------------------------|---|
| <b>High Priority (Red):</b>           | Those who need immediate treatment and immediate transport in order to survive.   |
| <b>Intermediate Priority (Amber):</b> | Those who will most likely survive but require treatment.   |
| <b>Low Priority (Green)</b>           | Those who require little or no treatment or whose treatment and transportation can be delayed.  |
| <b>Lowest Priority: (Black)</b>       | Those who cannot be expected to survive even with treatment, those who cannot be expected to survive in a mass casualty situation, and those whose vitals are absent. |

The table that follows will summarize the basic triage principles using specific examples.

As mass casualty situation is an event where the number of patients exceed the initially available treatment and transport capacity.

Incidents involving two or more patients should be managed by triaging the patient's condition, and matching their individual needs to the available resources.

In normal daily care, urgency is the sole triage criteria.

In mass casualty triage two (2) factors determine priority: **urgency** and **potential for survival**. A rapid system for field triage in mass casualty settings is included in the following table

The following table summarizes basic triage principles using specific examples.

### Basic Triage Summary

<b>High Priority (Red Priority)</b>	<b>Intermediate Priority (Amber Priority)</b>
<ul style="list-style-type: none"> <li>▪ Airway and breathing difficulties.</li> <li>▪ Shock</li> <li>▪ Uncontrolled or suspected bleeding</li> <li>▪ Open chest or abdominal wounds</li> <li>▪ Any pneumothorax</li> <li>▪ Severe head injuries or head injuries with decreased level of consciousness</li> <li>▪ Severe medical problems, such as: poisoning, diabetes with complications, and cardiac emergencies, etc.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Burns without complications</li> <li>▪ Major open or multiple fractures</li> <li>▪ Back injuries with or without spinal cord damage</li> <li>▪ Eye injuries</li> <li>▪ Stable abdominal injuries</li> </ul>
<b>Low Priority (Green Priority)</b>	<b>Lowest Priority (Black Priority)</b>
<ul style="list-style-type: none"> <li>▪ Fractures, sprains or strains, lacerations, soft tissue injuries or other injuries of a minor nature</li> <li>▪ Psychological problems</li> <li>▪ No injuries</li> </ul>	<ul style="list-style-type: none"> <li>▪ Obviously mortal (devastating) wounds where death appears reasonably certain (if sufficient personnel are not available to care for other patients)</li> <li>▪ Obvious death</li> <li>▪ Cardiac arrest (if sufficient personnel are not available to care for other patients)</li> </ul>

### General Approach to Triage:

- Triage should begin as part of the initial scene assessment.
- One of the senior responding EMS personnel or other medical authority should be in charge of the medical response and establish and remain in contact with the site commander.
- A safety perimeter must be established.
- Personal protective equipment should be utilized as appropriate.
- Routine Practices (BSI) techniques and equipment should be utilized as appropriate.
- All providers and bystanders should be protected from environmental hazards as appropriate.
- An estimate of the number and type of casualties should be performed.
  - This information must be forwarded to the dispatch centre so the appropriate senior staff can be informed.
  - The designated site commander should be informed of this information.

- Notify potential receiving healthcare facilities of numbers and estimated severity of patients' condition(s).
- Call for additional assistance if required.
  - Initiate disaster protocol if the situation meets the local or regionally established criteria.
- The total number of casualties should be assessed and reassessed regularly.
- All patients should be moved through a central/triage area (see Casualty Flow Chart)
- The decision to centralize/move patients prior to triage and treatment depends on:
  - Distribution of patients at the site
  - Scene assessments/safety
  - Available resources
- Initial treatment and stabilization should occur prior to move.
- If resources do not permit for this then triage must be performed on all patients in the field.
- Primary survey (initial assessment) on all patients:
  - Rapid assessment (ABC's) and triage of all patients
    - Open airway for unconscious patients and give two ventilations if necessary
    - Tag all patients utilizing triage tags
- Treatment area:
  - After initial triage move patients into smaller more workable groups by category
  - Correct immediate life threatening conditions
  - Conduct a secondary assessment (detailed exam) on all patients
- Correct other immediate life threatening conditions if resources permit:
  - In a mass casualty situation, prolonged effort in assessing and treating patients in the low/lowest priority category is inappropriate if it delays the assessment and treatment of the remaining patients.
  - This delay may result in unnecessary deterioration or death of a patient who might otherwise have been saved through basic interventions.
  - As additional resources become available, low priority patients should be reassessed and treated if appropriate

- Treat and transport as indicated by priority, equipment, and provider availability.

**Note:**

- Initial triage must be conducted rapidly and carefully ensuring no patients are missed.
- One person must assume control to oversee patient treatment, delegate equipment and resources, and coordinate proper loading order and dispositions (i.e. order of transport priority).
  - This person must remain in charge until relieved by a suitably qualified individual.
- The command EMS personnel or the medical authority in charge should remain at the scene to direct additional units.
- Communications with health care facilities, other ambulances units, rescue vehicles, and other responding agencies is paramount to the successful management of a mass casualty situation.
  - The inability to communicate effectively between all responding agencies and receiving facilities is the most common problem in managing a mass casualty situation.
- EMS personnel are responsible for being familiar with:
  - Disaster plans for their service, community and region.
  - Communication procedures.
  - Criteria for activating different levels of response.
  - Their roles and responsibilities at a mass casualty incident.
- Use of triage tags is helpful in identifying, prioritizing, and tracking of patients from the scene through to final destination in the health care facility.
- Implementation of local critical incident stress protocols should be considered early in the incident.
- A morgue for the dead should be established in a different location from the casualty collecting area.
- Medical response must remain coordinated with other response agencies and activities.
  - This is best done through the overall site commander.

## S.T.A.R.T. for Mass Casualty Settings

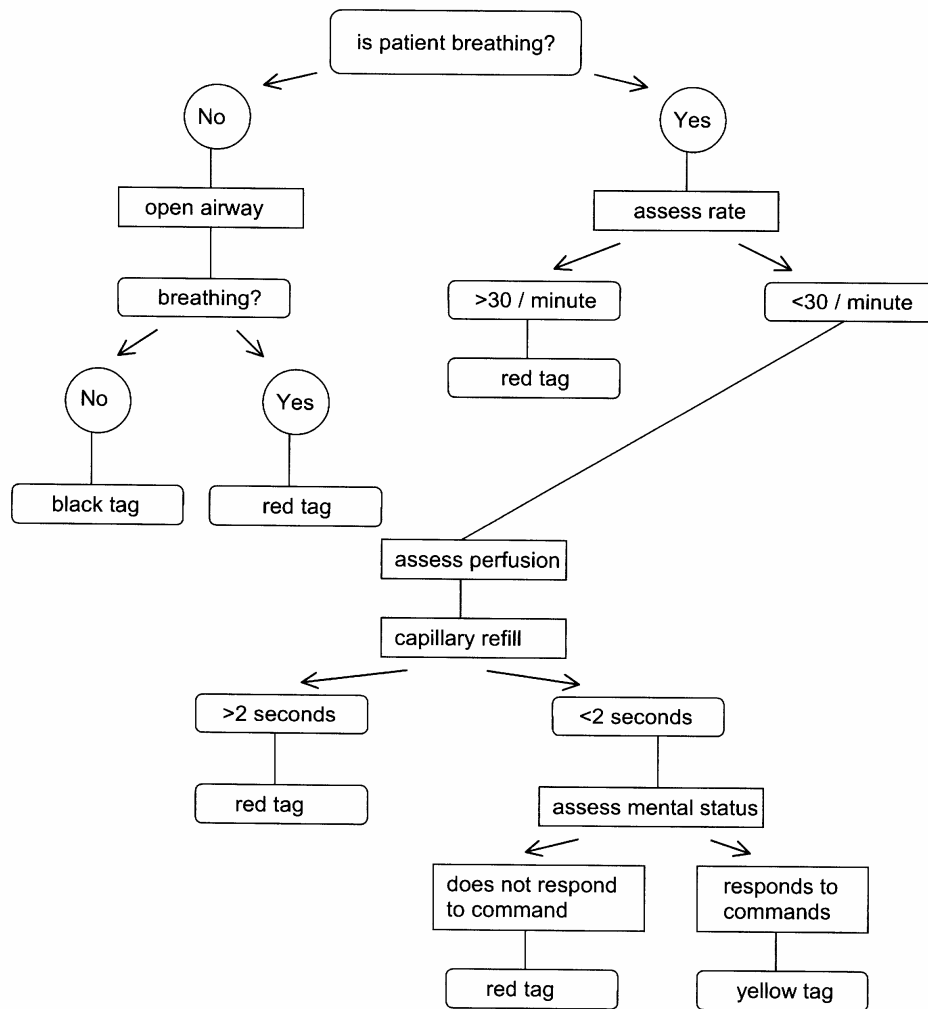
One that has proven very successful is “START”, which stands for “Simple Triage and Rapid Treatment”.

It is designed for rapid assessment and categorization of multiple patients in minimal time.

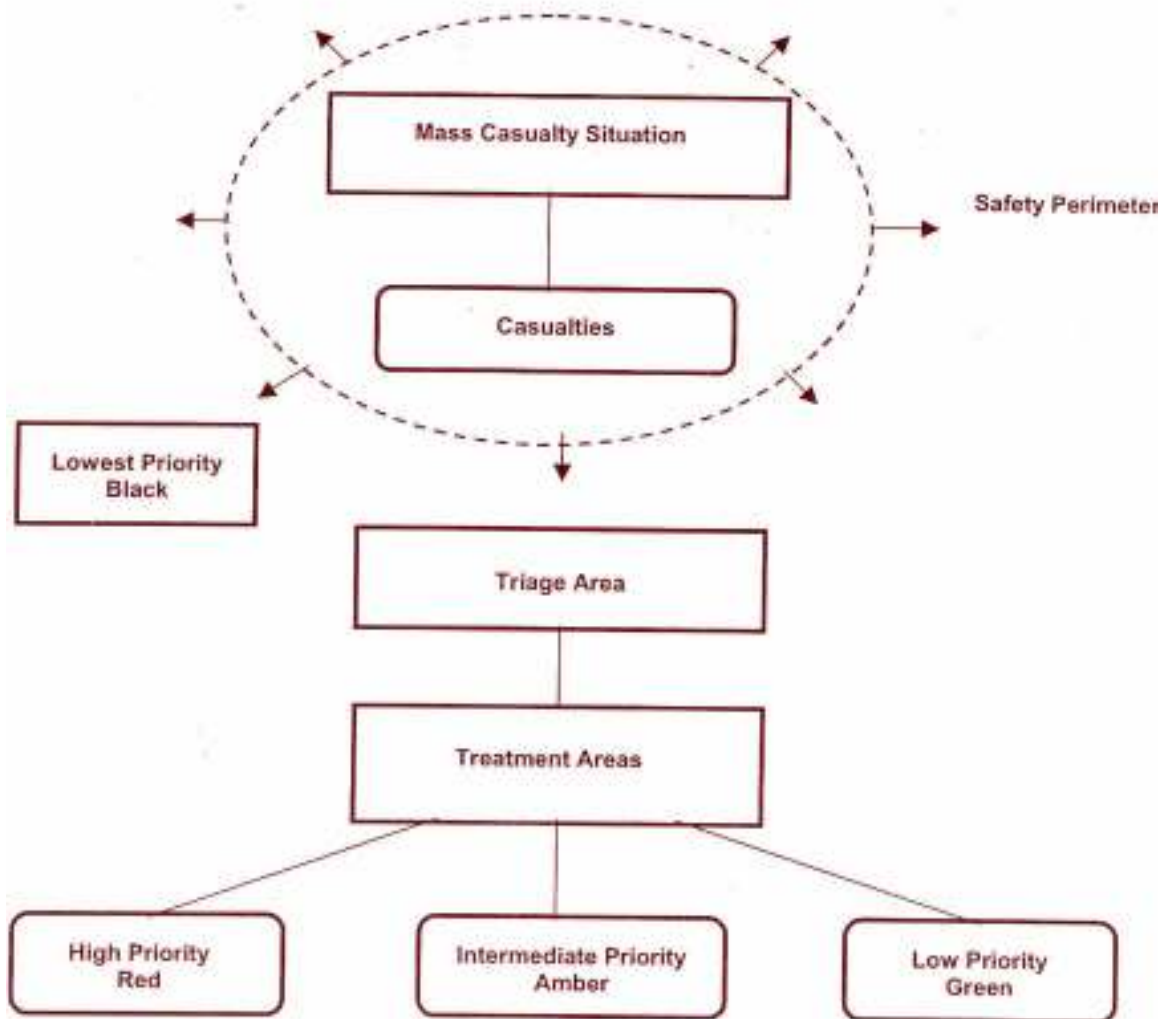
### Appendix 2. S.T.A.R.T for Mass Casualty Settings

S.T.A.R.T. refers to simple triage and rapid treatment

→ it is designed for rapid assessment and categorization of a multiple patients in minimal time



## Casualty Flow Chart



### **Primary Survey (Initial Assessment)**

The primary survey (initial or rapid assessment) is a methodical process used to quickly identify immediate life threatening injuries and conditions that require intervention without delay. Even as you are approaching the patient, you should begin to form a general impression as to their overall condition.



*As you approach the patient,, form a general impression of his or her overall condition*

The primary survey (initial assessment) should be completed promptly upon initial patient contact if no immediate life threatening injuries and conditions requiring intervention are found during the survey.

The primary survey (initial assessment) should only be interrupted when:

- A life threatening condition is identified and immediate life saving interventions are initiated
- The scene conditions require that the patient be moved immediately due to danger to EMS personnel or the patient.

If the primary survey (initial assessment) is interrupted, it should be completed as soon as possible.

### **General**

- The scene should only be entered if and when it has been determined it is safe for EMS personnel to do so
- Personal protective equipment should be utilized as required
- Routine practices (body substance isolation) techniques should be utilized as required
- Scene and safety considerations are a vital component of the primary survey
- Triage may be required if multiple patients are present and exceed current resources
  - EMS personnel should quickly determine if additional resources are required and request these resources immediately

### **Primary Survey (Initial Assessment) Considerations**

- As the EMS personnel approach the patient they should self-identify and seek permission to treat (where appropriate)

- While the primary survey is underway, other members of the EMS team should gather as much pertinent patient information as possible
  - This includes determining the presence of a health care directive or do not resuscitate order
  - EMS personnel should refer to The Health Care Directives Act for detailed information on health care directives, including definitions, making of directives, revocation of directives, proxies and general provisions of this Act.

### **Primary Survey (Initial Assessment)**

- Performed initially on every patient
- Repeat at regular intervals (5-15 mins.) or when there is a change in the patient's status
- Determine level of consciousness and responsiveness using the Glasgow Coma Scale or the “AVPU” (alert-verbal-pain-unresponsive) method
- Airway
  - Patency
  - Dentures
  - Perform maneuvers to open airway if indicated
- Establish cervical spine control if indicated
  - Maintenance of an open airway and ensuring adequate respirations has priority over all other treatments, including control of the cervical spine
- Breathing
  - Presence of spontaneous respirations
  - Adequacy of ventilations
  - Initiate oxygen therapy if indicated
- Circulation
  - Check for the presence of a pulse (note rate, rhythm and quality)
  - Initiate CPR if indicated
  - Assess for sources of external bleeding
    - Control major external bleeding if indicated
- Examine the chest if indicated
  - Expose
  - Visualize

- Palpate
  - Auscultate the chest (if within scope of practice)
  - See Chest Injuries ETG for interventions in the primary survey (initial assessment)
- Identify and correct any immediate threats to life during the primary survey (initial assessment)
- If a life-threatening problem is found, stop primary survey (initial assessment) and attempt to correct the life-threatening problem.
  - Consider load and go if life-threatening problem is identified
  - Be prepared to initiate transport to the nearest appropriate health care facility.

**Note:**

- If the patient's medical condition is determined to be unmanageable or a life-threatening injury is identified:
  - Load and go should be initiated as soon as possible
    - On scene times should be kept to a minimum
    - Treat other conditions en route
  - Transport the patient to the nearest appropriate health care facility
    - Notify the receiving health care facility of the patient's status as soon as possible
    - Monitor and treat the patient en route
    - Additional surveys and treatments should be conducted en route
  - Document all actions including the decision to initiate load and go
  - Report all findings to the receiving facility staff, and document on the patient care report.
  - If the patient's medical condition or injuries identified in the primary are determined to be manageable and the scene is safe:
    - The remaining primary (initial) and secondary (detailed) surveys may be completed at the scene
    - Transport the patient to the nearest appropriate health care facility
    - Record all pertinent information on the patient care report
    - Report this information and any changes in patient status to the receiving health care facility staff.



*Listen to breath sound from the patient's back if possible, over the apices, the bases, and the major airways. If the patient is immobilized or in a supine position, listen from the front.*

## **Rapid Assessment:**

The rapid assessment follows the primary survey (initial assessment.) If you have successfully stabilized ABCD on any patient who is unconscious, confused, or unable to adequately relate the chief complaint, you should perform a rapid assessment, using the mnemonic “DCAP-BTLS” (described below). The purpose of the rapid medical assessment is to quickly identify existing or potentially life-threatening conditions.

The rapid trauma assessment should be performed on any patient with significant mechanism of injury to identify life-threatening injuries. The rapid trauma assessment should be performed on responsive and unresponsive patients alike. Remember you can use your responsive patient as a resource; you should ask him or her about symptoms throughout your assessment. The purpose of this assessment is to zero in on the patient’s problems, and identify potentially life-threatening conditions, which will direct your physical exam.

Remember you should interrupt your assessment to stabilize any immediately or potentially life-threatening conditions. Once these conditions have been stabilized, you may continue with your assessment.

Mnemonics for assessments include:

**DCAP(P)-BTLS:** Deformities, Contusions, Abrasions, Punctures, (Penetrations), Burns, Tenderness, Lacerations and Swelling.

**TRD:** Tenderness, Rigidity, Deformity.

**PMS:** Pulse, Movement, Sensation.

Assess the head - look for:

- DCAP-BTLS
- Crepitation

Assess the neck – look for:

- DCAP-BTLS
- Tracheal Deviation
- Medic Alert and JVD

Assess the chest and look for:

- DCAPP-BTLS and
- Auscultate in two locations

Assess the abdomen – look for:

- DCAP-BTLS – TRD

Assess the pelvis – look for:

- DCAP-BTLS

Assess the upper and lower extremities-look for:

- DCAP-BTLS and PMS

Examine the back during log roll - look for:

- DCAP-BTLS

A set of vital signs should be taken and documented. A complete set of vital signs include:

- Level of consciousness (LOC)
- Pulse rate, rhythm, quality
- Respiratory rate, rhythm, quality
- Blood pressure
- Skin temperature, color and condition
- Pupil size and reaction

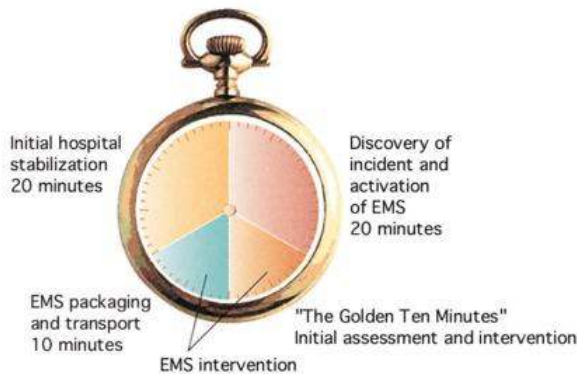
Based on the initial and rapid assessments along with clinical judgment, a decision will be made as to the:

1. Nature of the call
  - a) Medical (includes obstetrical), or
  - b) Trauma (includes burns), and
  
2. The condition of the patient
  - a) Critical
  - b) Unstable
  - c) Stable

Decide to load and go or stay and play

## The Golden Hour

Once it has been identified that a patient has a traumatic injury or serious medical condition, rapid treatment and transport decisions must be made. Traumatic injuries and medical conditions that are life threatening usually cannot be treated in the field. It has been found that patients with these types of conditions have the best chance of survival if they reach the hospital within **the golden hour**. The golden hour refers to the 60 minutes following the time that shock or traumatic injuries were sustained where treatment is most critical and chance of survival is the greatest. Therefore on scene times should be kept to a minimum and transport should not be delayed.



*The Golden Hour is the time during which treatment of shock or traumatic injuries is most critical and the potential for survival is best.*

- Discovery of incident and activation of EMS - 20 min
- Initial assessment & treatment – “Golden 10 Min”
- EMS packaging and transport – 10 min
- Initial hospital stabilization – 20 min

### A sampling of conditions that necessitate immediate transport include:

- Unconscious patient, decreased LOC
- Airway compromise
- Breathing absent or abnormal
- Circulation compromised / uncontrolled bleeding
- Shock (hypo perfusion)
- Complicated childbirth
- Chest pain with systolic blood pressure < 100mmHg
- Multiple injuries

## **Focused History**

Once the initial and rapid assessments have been conducted to identify and manage immediate life threatening conditions involving the ABCs, the next step is a focused history and detailed assessment which consists of 3 main steps:

- Obtain a S.A.M.P.L.E. history
- Conduct a detailed assessment; and
- Perform a differential diagnosis using AEIOU-TIPS.

If significant medical problems are recognized during the initial & rapid assessment, they must be investigated in more detail. Note when the problem was first recognized and how it affected the patient. How frequently did it happen & what medical care was sought? Was the care sought effective or did the problem recur?

**S.A.M.P.L.E.** is an acronym that can be used to help remember pertinent questions:

- S** - Signs and symptoms
- A** - Allergies
- M** - Medications
- P** - Pertinent past history
- L** - Last oral intake
- E** - Events

**AEIOU–TIPS** is a mnemonic used to help reach a differential diagnosis:

- A** – Alcohol, acidosis, apnea
- E** - Epilepsy (seizures) & environment
- I** – Infection
- O** – Overdose or under dose
- U**- Uremia
- T** – Trauma
- I** – Insulin (to much, too little)
- P** – Psychiatric or poisoning
- S** – Stroke (CVA) or shock

## **Secondary Survey (Detailed Assessment)**

The secondary survey (detailed and focused assessments) is a systematic head-to-toe examination of every part of the patient's body, including assessing the vital signs and obtaining a patient history. The call for EMS assistance is often the patient's entry point into the medical care system. It is important that EMS personnel conduct a systematic secondary survey to ensure medical or traumatic conditions are identified and the patient's baseline is established. This will permit identification of changes in the patient's condition

## General

- Personal protective equipment should be utilized as required.
- Routine practices should be utilized as required.
- A secondary survey should NOT be done on the scene if a life threatening illness or injury has been identified and it cannot be immediately corrected
  - Performing the secondary survey in this situation is unlikely to yield any conditions that will significantly improve the patient's condition
  - These patients should have their secondary survey (detailed assessment) carried out en route if possible.
- Maintaining the airway, assisting with ventilations, or hemorrhage control may prevent a secondary survey (detailed assessment) from being carried out, even while en route.
  - If any of these interventions prevents performance of a secondary survey, the reason(s) should be documented on the patient care report
- Perform an organized head-to-toe assessment
- Life-threatening conditions NOT identified and treated in the primary survey (initial assessment) should be reassessed in the secondary survey (detailed assessment)
- Life-threatening conditions identified and treated in the primary survey (initial assessment) should be reassessed in the secondary survey (detailed assessment)
- Load and go criteria should be considered throughout the entire secondary survey (detailed assessment)
- Reassure the patient and keep him/her informed about treatment(s)
- Obtain a pertinent, focused history from the patient, family, bystanders, and first response agency (if applicable)
  - Consider alternate sources of medical identification (e.g. Medic-Alert) if available
- Obtain and record:
  - Level of consciousness
  - Pulse
  - Respiratory rate
  - Blood pressure
  - Auscultation of the lungs (if within scope of practice)
  - Assessment of skin
  - Assessment of pupils
  - Pulse oximeter reading, if indicated (if within scope of practice)
  - Glucometer readings, if indicated (if within scope of practice)

## Special Considerations

### Patient History

- The goal is to facilitate rapid identification of patient problem(s) and establish which problem(s) require immediate care in the field
- Circumstances surrounding an emergency response may make it difficult to obtain all relevant historical information
  - EMS personnel must make every effort to obtain a relevant, detailed patient history on every patient and document this information on the patient care report
- The patient history should be focused on eight (8) core components:
  - Patient identifiers
    - Patient name, age, sex, date of birth, and personal health information number
  - Chief complaint
    - Main reason patient called for assistance
  - Mechanism of injury
    - This includes a scene assessment
  - History of present illness or injury
    - This includes a number of qualifying factors
      - Location
      - Quality
      - Intensity
      - Quantity
      - Sequence of events
      - Circumstances surrounding the onset of first symptoms
      - Aggravating and alleviating factors
      - Associated symptoms
      - Attempts to relieve symptoms
      - Pregnancy
  - Relevant past medical history
    - Underlying medical problems
    - Name of primary care doctor
    - Name of clinic or hospital usually attended
    - Health Care Directives
  - Medications
    - Include name and doses
    - Confirm whether medications have been taken and their effect
    - Identify who gave or assisted the patient to take or administer any medications

- Allergies
  - Past reactions
  - Note any Medic-Alert identification
  
- Observations
  - What was observed at the scene
  - What was done to and for the patient, particularly
    - Extrication
    - Intervention(s) or treatment(s)
      - Medication administration or assistance , including dose, route, time of administration, and change(s) in patient status
  
- Reasons for decisions made that impacted on patient care
  - Load and go, environment, physician on scene taking patient care responsibility
  
- Any unusual circumstances
  - Violence, abuse, neglect
  
- Any other potentially pertinent information

#### Assessment of Vital Signs

- Initial set of vital signs should be taken on every patient
  - If not taken, a reason should be documented in the patient care report
- Repeat at regular intervals (5-15 mins.) or when there is a change in the patient's status
- If the patient's condition is unstable more frequent assessments are required

#### Vitals signs must include

##### Respirations

- Present or absent
- Rate (document as breaths per minute)
- Rhythm
  - Regular or irregular (note any patterns)
- Quality
  - Evidence of dyspnea should be noted
  - Shallow, labored, noisy (if possible, describe the sound)
  - Evidence of accessory muscle use or diaphragmatic breathing
- If EMS personnel are trained to perform chest auscultation this should be done in the primary survey (initial assessment) and repeated in the secondary survey (detailed assessment)

- Bilateral, comparative auscultation of the lungs should be done anteriorly and posteriorly
  - Note presence or absence of breath sounds.

#### Pulse

- Present or absent
- Rate (document as beats per minute)
- Rhythm
  - Regular or irregular (note any patterns)
- Quality
  - Strong, weak, absent

#### Blood Pressure

- Measure systolic and diastolic pressures, if possible
- When assessing a BP
  - Ensure the BP cuff size is correct
  - Palpate a pulse distal to the BP cuff
  - Rapidly inflate the BP cuff to approximately 30 mm Hg beyond systole (the pressure at which the pulse initially disappears)
  - Place the stethoscope diaphragm over the site being utilized for assessment
  - Deflate the BP cuff at a rate of approximately 2 mm Hg per second
  - Note the systolic and diastolic pressures
  - Fully deflate the BP cuff
  - Document the pressures as systolic/diastolic in mm Hg
  - If the assessment was done by palpation, record the pressure as systolic/P
  - Document any difficulties in obtaining a blood pressure

#### Glasgow Coma Scale

- Score each component and record it on the patient care report
- Repeat the assessment at regular intervals (5-15 mins.) or when there is a change in the patient's status
- The "AVPU" scale can be used as an alternate method to assess level of consciousness during the primary survey, but a more formal assessment using the Glasgow Coma Scale is required for the Secondary Survey (Detailed Assessment)

#### Secondary Survey (Detailed Assessment)

- Detailed head-to-toe survey includes assessment of all parts of the body using
  - Observation
  - Comparison for bilateral symmetry
  - Inspection
  - Auscultation (if within scope of practice)
  - Palpation
- Life threatening conditions found during the secondary survey (detailed assessment) should be treated immediately

- Load and go should be considered if this occurs
- Cervical spine stabilization should be maintained during the secondary survey (detailed assessment)
- The patient's clothing should be removed or cut away in order for EMS personnel to properly assess the patient
  - Patient privacy should be maintained at all times

#### Skin

- Check for evidence of cyanosis, diaphoresis. Discoloration, or trauma
- Assess skin color, temperature and moisture

#### Neck

- Check for trauma, jugular vein distension, or presence of a stoma
- Check for deformities of the bony spine or soft tissue
- Check for tracheal deviation
- Look for Medic-Alert identification
- Palpate for tenderness, swelling or abnormalities
- Assess carotid pulse

#### Scalp and Skull

- Check for trauma or external bleeding
- Look for evidence of basilar skull fracture
- Inspect and gently palpate for depressions and impaled objects
- Assess for tenderness or pain

#### Ears and Nose

- Check for trauma or deformity
- Check for discharge or blood
- Assess for tenderness or pain

#### Face

- Check for trauma or bleeding
- Check for cyanosis and diaphoresis
- Assess for tenderness or pain
- Assess for symmetry and facial droop
- Assess mouth for
  - Foreign bodies
  - Broken dentures and teeth
  - Blood or vomitus
  - Abnormal smells
  - Impaled objects
- Assess lips for cyanosis or trauma

#### Eyes

- Check for trauma or bleeding
- Look for glass eye or contact lenses

- Assess for tenderness or pain

#### Pupils

- Check for abnormal shape(s)
- Look for cataracts or evidence of eye surgery
- Assess pupil size
  - Note size in millimeters for each eye
- Assess pupillary reaction to light
  - Normal or slow
- Assess eye movement

#### Chest

- Reassess the chest during the secondary survey
- Look for evidence of obvious trauma
- Examine for
  - Signs of respiratory distress
  - Use of accessory muscles
  - Diaphragmatic breathing
  - Paradoxical respirations
  - Penetrating injuries
- Palpate the chest for:
  - Symmetry on inspiration and expiration
  - Tenderness and instability
  - Subcutaneous emphysema
- Assess shape and symmetry
- Assess chest as far to the posterior as possible
- Auscultate for equality of breath sounds through bilateral comparison (if within scope of practice)
- Note any changes from assessments in the primary survey (initial assessment)
- Treat for any flail segments, penetrating injuries or impaled objects

#### Pulse Oximetry (if within scope of practice) (refer to ETG Appendix 19)

- Obtain only where indicated
- Limitations of the pulse oximeter must be kept in mind
  - Treatments should be based on the patient's presenting condition **NOT** on pulse oximeter readings
  - A pulse oximeter should never be used to monitor a patient at the exclusion of repeated physical assessment and monitoring

#### Abdomen

- Expose the abdomen
- Inspect the abdomen prior to a physical assessment for :
  - Obvious trauma, impaled objects, or evisceration
  - Distention
  - Use of accessory muscles during respirations and for diaphragmatic breathing

- Palpate the abdomen
  - Assess each quadrant, by palpating gently using a flat hand and fingers
- Assess for evidence of peritoneal irritation
  - Pain, guarding or rigidity

#### Pelvis

- Check for obvious trauma, impaled objects or pain
- Check for symmetry or deformity
- Note pain or crepitus when the pelvis and symphysis pubis are palpated
- Assess for priapism and incontinence of urine or feces
- Check for evidence of hemorrhage

#### Extremities

- Expose the extremities
- Check for obvious trauma, impaled objects, or hemorrhage
- Check for symmetry or deformity
- Check for pain or crepitus
- Check for color, warmth, circulation and movement in each extremity
  - Pay particular attention to the hands and feet
- Assess for edema
- Assess for pulses and adequacy of sensation and movement distal to any injury
- Look for the presence of Medic-Alert identification

#### Back

- If not contraindicated, the patient should be carefully log rolled to assess the back
  - Cervical spine control should be maintained during assessment of the back
- If appropriate, a back board (or equivalent device) should be positioned so that when the patient is log rolled back it is directly onto the back board
- Check for obvious trauma or hemorrhage
- Check for localized pain or deformity of the spine
- Check for generalized pain and crepitus
- Check for movement and sensation distal to any suspected spinal injury
- Look for penetrating injuries or impaled objects
- Palpate for subcutaneous emphysema

Reassess the patient's vital signs and level of consciousness

Record all findings, including pertinent negatives, on the patient care report

Report the relevant patient information to the staff at the receiving health care facility

The chart that follows outlines the various components to consider for the assessment of the various body systems.

<b>R E S P</b>	<b>ASSESS CHEST CONFIGURATION, RESP, RATE, RHYTHM, DEPTH, PATTERN, SOUNDS</b>								
	DYSPNEA		CYANOTIC		CRACKLES (fine)		BARREL CHEST		PAIN
	COUGH		LABORED		CRACKLES (coarse)		ASYMMETRIC		OTHER
	SPUTUM		WHEEZING		SHALLOW		TRACH DEV.		NOT REMARKABLE
	ORTHOPNEA		AIR ENTRY						
<i>Orthopnea= difficulty breathing lying flat (how many pillows at night)</i>									
<b>C V</b>	<b>ASSESS HEART RATE, RHYTHM, PULSE, B.P., CIRCULATION, FLUID RETENTION</b>								
	PAIN		FATIGUE		IRREG. PULSE		J.V.D.		CYANOSIS
	COLLAPSE		NUMBNESS		DYSRHYTHMIA		PALLOR		OTHER
	DIZZINESS		TINGLING		EDEMA		DIAPHORESIS		NOT REMARKABLE
<b>N E U R O</b>	<b>ASSESS MOTOR FUNCTION, SENSATION, LOC, STRENGTH, GRIP, ORIENTATION</b>								
	HEADACHE		NUMBNESS		VERTIGO		PARALYSIS		ALTERED SPEECH
	WEAKNESS		TINGLING		PAIN		SEIZURES		OTHER
	UNSTEADY		VISION		CONFUSED		TREMORS		NOT REMARKABLE
<b>G I</b>	<b>ASSESS WT, BOWEL HABITS, BOWEL SOUNDS, SWALLOWING, NUTRITIONAL STATUS</b>								
	PAIN		DYSPHAGIA		DISTENTION		NON-TENDER		NOT REMARKABLE
	NAUSEA		DIARRHEA		RIGIDITY		OTHER		
	VOMIT		CONSTIPATION		MASS		STOOL COLOR:		
	ANOREXIA		THIRST		SOFT		LAST MEAL TIME:		
<i>Dysphagia= difficulty swallowing</i>									
<b>G U &amp; G Y N</b>	<b>ASSESS URINE, FREQUENCY, CONTROL, CONSISTENCY, ODOUR/GYNE ASPECTS</b>								
	<b>B. CONTROL METHOD:</b>			<b>REG OF MENSES</b>			<b>LMP:</b>		
	DYSURIA		OLIGURIA		PAIN		DISCHARGE		OTHER
	HEMATURIA		HESITENCY		VAG. BLEED		INCONTINENT		NOT REMARKABLE
	NOCTURIA		FREQUENCY		PREGNANCY		URINE COLOR		
	<i>Dysuria= difficulty or pain in urination</i>				<i>Oliguria= scanty urine production</i>				
	<i>Hematuria= urine contains blood</i>								
	<i>Nocturia= excessive urination at night</i>								
<b>M S &amp; S K I N</b>	<b>ASSESS MOBILITY, MOTION, GAIT, ALIGNMENT, JOINT FUNCTION</b>								
	<b>SKIN COLOR - TEXTURE, TURGO, INTEGRITY</b>								
	PAIN		WOUND		ITCHING		FLUSHED		HYGIENE
	SWELLING		APPLIANCE		SKIN COLOR		MOIST		CW/CM
	STIFFNESS		PROSTHESIS		DIAPHORETIC		PETECHIAE		OTHER
	DEFORMITY		ATROPHY		HOT		POOR TURGOR		NOT REMARKABLE
	ECCHYMOSIS		RASH		COOL		DRAINAGE		
	<i>Ecchymosis= purplish patch caused by extravasion of blood into the skin, differing from petechiae only in size</i>								
	<i>Petechiae= minute hemorrhagic spots, of pinpoint to pinhead size, in the skin</i>								

## **Ongoing Assessment**

The ongoing assessment is performed continuously until care of the patient is turned over to the receiving facility. Its purpose is to determine any changes in the patient's condition and to assess the effectiveness of patient care. The ongoing assessment should be performed on all patients whether the patient is responsive or unresponsive, unstable or stable. If a critical patient condition is found during the ongoing assessment, immediate care to correct the condition should be provided.

To perform an ongoing assessment:

- Repeat the primary survey (initial assessment)
- Repeat vital signs
- Reestablish patient condition
- Check interventions
- Provide appropriate care

## **Determination of Death**

In the absence of a health care directive (living will), the general rule is: if the body is still warm and intact, initiate emergency medical care. An exception to this rule is cold temperature (hypothermia) emergencies. In the case of hypothermia, the patient should not be considered dead until the patient is warm and dead.

Resuscitation DOES NOT need to be initiated if any of the following is present:

- Decapitation
- Transection
- Lividity and/or rigor mortis
- Decomposition

For a more detailed description of this topic, refer to Manitoba Health "Emergency Treatment Guidelines".

## **Communication and Documentation**

A failure to communicate clearly – both in what others communicate to you and what you communicate to others – can have a significantly adverse affect on the quality of the assessment and care you and others provide to the patient.

In addition, a significant portion of the value of patient assessment and care is lost if what you have learned about the patient's condition and the care you have given is not clearly and adequately documented in your written reports.

The following information should be included in all verbal and written communications and reports:

- Patient information (name, age, etc)
- Chief complaint
- History of chief complaint
- Past medical history
- Physical findings
- Treatment/interventions and response to them
- Changes en route

## **Patient Medications**

Paramedics always document the prescribed medications that a patient is taking. It is very useful to have an understanding of common patient medications to use as an assessment tool in making a working diagnosis. For example, if a patient is complaining of shortness of breath and hypertension, look to the medications the patient is taking. If there are medications used in the treatment of CHF, consider this as one of your possible working diagnoses. Is the trauma patient on blood-thinners? It is also noteworthy to ascertain if the patient is compliant with their medication. Has the diabetic patient taken the correct insulin dose? Or is the seizing patient compliant with their Dilantin?

Knowledge of common medications can be a very useful adjunct to a comprehensive patient assessment. It may not always give you the answers, but it may point you in the right direction, or provide some insight into anticipating changes in a patient's condition.

### **Common Patient Medications for Common Pre-hospital Emergencies**

<b>CHF/anti-anginal/Hypertension</b> Beta Blockers	Atenolol, Sotalol, Propranolol/Inderal, Metoprolol, Nadolol, Pindolol
<b>CHF/anti-anginal/Hypertension</b> ACE (angiotensin converting enzyme) inhibitors	Enalapril/Vasotec, Ramipril, Monopril/Fosinopril, Inhibace, Captopril, Prinivil/Lisinopril
<b>CHF/anti-anginal/Hypertension</b> Calcium Channel Blockers	Diltiazem/Cardizem, Verapamil
<b>CHF/anti-anginal/Hypertension</b> Anti-arrhythmics	Amiodarone, Digoxin
<b>CHF/anti-anginal/Hypertension</b> Diuretics	Hydrochlorothiazide, Lasix/Furosemide, Chlorthalidone
<b>CHF/anti-anginal/Hypertension</b> Anti-anginal	Nitro patch or spray, Isosorbide

<b>CHF/anti-anginal/Hypertension</b> Anti-platelet	ASA, Plavix (Clopidogrel), Coumadin, Warfarin, Ticlid
<b>CHF/anti-anginal/Hypertension</b> Anti-hypertensives	Nifedipine/Adalat, Methyldopa, Norvasc/Amlodipine
<b>COPD</b> Puffers/Bronchodilators	Salbutamol/Ventolin, Ipratropium/Atrovent, Flovent, Beclomethasone
<b>Siezuers</b> Anti-convulsants	Dilantin/phenobarbitol/phenytoin, Tegretol, Gabapentin/Neurontin, Ativan/Lorazepam, Valpoic,acid, Diazepam/Valium, Epival
<b>Behavioral Disorders</b> Anti-depressants	Effexor/venlafaxine, TCA's – Amitriptyline, Doxepin, Fluvoxamine, Prozac/fluoxetine, Paxil, Zoloft
<b>Behavioral Disorders</b> Anxiety/Panic Disorder	Alprazolam/Xanax, Ativan/Lorazepam, Diazepam/Valium
<b>Behavioral Disorders</b> Anti-psychotic	Haloperidol, Lithium, Risperidone
<b>High Cholesterol</b>	Lipidil, Atorvastatin, Simvastatin/Zocor, Lovastatin
<b>Diabetes</b>	Glyburide, Metformin

\*\* The preceding list is meant to list some common medications you may come across and is not meant to be all inclusive. \*\*

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