

Standard Approach and Ongoing Assessment 2.1

SFA FMR EMR PCP	Initial Scene Assessment <ul style="list-style-type: none"> • Scene Safety • Additional Resources • Crime Scene? • Note Mechanism of Injury and Number of Patients
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SFA FMR EMR PCP	Follow Infection Prevention & Control (IP&C) Guidelines <ul style="list-style-type: none"> • Perform Hand Hygiene • Don appropriate PPE based on Point of Care Risk Assessment (PCRA)
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Patient Safety Considerations

- Assessment for Domestic Violence should be performed for all patients
- Perform clinical handover to EMS using iCHAT

SFA FMR EMR PCP	Perform Primary Patient Assessment <ul style="list-style-type: none"> • Assess mental status • Assess A,B,C,Ds • Expose and examine priority areas • Identify priority patients
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Patient Safety Considerations

- To Keep Vein Open with IV Infusion should be a rate of 30-60 ml/hour

Perform Primary Set of Vital Signs on all Patients Normal Values by Age Group (*50 th Percentile Values)						
Age	Pulse	Respirations	Blood Pressure (Systolic)	SPO2	GCS	Temperature
Newborn	110 – 160 bpm	35 – 60 / min	60 – 76 mmHg	94% – 100%	15	35.5 – 38 C
1 Yr Old	100 – 130 bpm	30 – 50 / min	86 mmHg*	94% – 100%	15	35.5 – 38 C
6 Yr Old	70 – 100 bpm	18 - 30 / min	95 mmHg*	94% – 100%	15	35.5 – 38 C
10 Yr Old	65 – 100 bpm	12 – 25 / min	103 mmHg*	94% – 100%	15	35.5 – 38 C
Adult	60 – 100 bpm	12 – 20 / min	90 – 140 mmHg	94% – 100%	15	35.5 – 38 C

Patient Specific Assessments and Diagnostic Tests				
Skin	Lungs	Blood Glucose	Pain Assessment	Cardiac Monitoring

General Patient Management						
All Patients		Clinical Judgement CONSIDERATIONS				
Obtain Repeat Vital Signs	Medical History	Oxygen	IV Access	Fluid/ Medications	Pain Medications	OLMC

SFA FMR EMR PCP	Perform Secondary Patient Assessment History / SAMPLE Repeat Vital Signs
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Disclaimer

The MCPs were developed using the principles of evidence based medicine; combining the clinical expertise from clinicians and physicians with the best available scientific evidence. They function as clinical decision making tools to be utilized by practitioners to provide the highest quality, evidence based care to patients. As the landscape of prehospital medicine is continuously improving, changing practice and evidence is reviewed and incorporated into the protocols. Select citations used to inform interventions within the protocols are referenced in the Evidence section; however, this is not a comprehensive list of the available literature and is meant to be a reference only. As the science grows, the protocols will continue to be updated with the relevant citations and clinicians are encouraged to use these citations to build their understanding of the evidence base informing their own practice.

Overview

1. Responders are expected to be knowledgeable of and to work within the standards of practice for their level of training as outlined in the AHS MFR Medical Control Protocols. Responders must use the Standard Approach and Ongoing Assessment Medical Control Protocol (MCP) for the initial assessment, reassessment and treatment of all patients. Patients may present with multiple clinical conditions, in such cases, responders must apply clinically indicated protocols concurrently while continually reassessing the patient's status and care needs.
2. The responder with the highest level of certification as determined by the Alberta Health Professions Act or provincially recognized First Aid Provider is ultimately responsible to determine the level and type of care required by the patient, both on scene and during transport. This can be best accomplished by ensuring all responders providing patient care, work collaboratively and within their current scope of practice (including any limitations or conditions identified by the Medical Directors) and continually reassess the level of care required for their patient(s).
3. The Standard Approach and Ongoing Assessment is organized to reflect the sequence of actions in caring for patients and includes the following sections:
 - Initial Scene Assessment
 - Infection Prevention and Control
 - Primary Patient Assessment
 - Secondary Patient Assessment
 - Medical History
 - General Patient Management
 - Online Medical Consultation
 - Transfer of Care

Initial Scene Assessment

- a. Responders must assess the scene as follows:
 - Review Communications Centre/Dispatch information
 - Assess the need for infection control measures and PPE based on a Point of Care Risk Assessment (PCRA)
 - Do not approach a patient with obvious chemical contamination; request assistance from local fire department and/or hazmat team if available
 - Assess the scene and determine if it is safe to enter; otherwise hold back
 - Assess for Goals of Care information and Greensleeve (should be located on or near patient's refrigerator)
 - Determine the mechanism of patient injury, if applicable
 - Determine the number and location of patients and request additional EMS crews as set out in the EMS Emergency Response Plan (ERP)
 - Determine the need for additional resources, such as EMS specialty teams (e.g. bariatric unit, TEMS , IRP, rotary support, home care, palliative care) and police or fire services

- b. Any location where an illegal act has been performed is considered a crime scene and special precautions must be followed and include:
 - Not approach any actual or potential crime scene until it has been secured by law enforcement personnel
 - Minimize the number of practitioners entering the scene
 - Accept that law enforcement personnel are in charge of the crime scene
 - Not touch or move anything unless it is necessary to do so for patient care
 - Leave the patient's clothing and personal items in the possession of law enforcement personnel

Goals of Care Designations

For more information visit albertamfr.ca and search for 'Goals of Care'.

Resuscitative Care – The focus is to prolong life using any medical or surgical means including, if needed, resuscitation and admission to Intensive Care.

Medical Care – Medical tests and interventions are used to cure or manage an illness as well as possible but don't use resuscitative or life support measures. This is appropriate when resuscitative and life support measures won't work or when the person chooses not to receive such support measures. Medical care can be provided in many locations, depending on the person's wishes and values as well as medical appropriateness.

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Comfort Care – In this approach to care, the aim of medical tests and interventions are for optimal symptom control and maintenance of function when cure or control of and underlying condition is no longer possible or desired. Transfer to a hospital may occur in order to better understand or control symptoms.

GOALS OF CARE DESIGNATIONS		Chest compressions	Intubate	ICU Admit - Adult	ICU Admit - Pediatric	Surgery	Site Transfer	Symptom control
R Resuscitative Care	1	✓	✓	✓	✓	✓	✓	✓
	2	X	✓	✓	✓	✓	✓	✓
	3	X	X	✓	✓	✓	✓	✓
M Medical Care	1	X	X	X	Can consider, if required for symptom control	✓	✓	✓
	2	X	X	X		✓	✓	✓
C Comfort Care	1	X	X	X				
	2	X	X	X		X	X	✓

Infection Prevention and Control (IP&C)

- The main goal of infection prevention and control (IP&C) is to prevent the transmission of health-care-associated infections to patients and responders. The modern application of infection control is described as “routine practices and additional precautions” which must be applied to every patient on every event.

Routine practice does not include the use of personal protective equipment (PPE). Only following a Point of Care Risk Assessment (PCRA) and if a hazard exists then apply additional precautions. This involves the application of one of three isolation procedures and their appropriate PPE.

The single most effective IP&C procedure to control infections in the work place and reduce the spread of infections is hand hygiene (HH).

Gloves are task specific and meant for single use, change between procedures and patients. Their use does not replace need for hand hygiene after their removal.

Routine Practice

For more information go to: albertahealthservices.ca and search for Infection Prevention and Control

1. Perform a Point of Care Risk Assessment (PCRA) for any of the following:
 - a. Presence of blood or body fluid
 - b. Assess for signs and symptoms of infections
 - Respiratory tract infection
 - Gastrointestinal tract infection
 - Septic Shock
 - Specific site infections
 - c. Performing an aerosol generating medical procedure
 - High risk - intubations/suctioning
 - Low risk – nebulizer CPAP unless signs and symptoms of infection
2. Hand hygiene (HH) must be performed:
 - a. Before entering or touching a patient or their environment
 - b. Only during emergent events HH at POC may not be feasible
 - c. Before any aseptic procedure
 - d. After exposure to body fluids
 - e. After leaving the patient or their environment
3. Personal protective equipment - only used if PCRA indicates (Additional Precautions)
 - a. Contact precautions – hand hygiene, gown, and gloves
 - b. Droplet precautions – hand hygiene, gown, simple mask, safety glasses/face shield, and gloves
 - c. Airborne precautions – hand hygiene, gown, N-95 respirator, safety glasses/face shield, and gloves.
4. Aseptic/clean technique
 - a. Applied prior to invasive procedures, or medication administration
5. Sharps handling
 - a. Activate safety engineered device
 - b. Dispose of at point of care
6. Cleaning and disinfection
 - a. Must be performed following every patient care event
 - b. Requires firm pressure and adequate wet time to remove pathogens

7. Pre arrival communication with EMS and documentation
 - a. Alert incoming EMS crew if the patient is suspected to have an infection risk in the Point of Care Risk Assessment.
 - i. Include any of the following information:
 - Cough
 - Febrile (greater than 38)
 - Travel within the last 3 months
 - Any rash
 - Any Additional Precautions taken
 - b. Document level of Additional Precautions, PPE use and exposure if applicable

Primary Patient Assessment

1. Every responder delivering a treatment / procedure to a patient has a professional or ethical duty to inform the patient of the nature of the treatment / procedure, its risks and benefits, alternatives, and the consequences of refusing the treatment / procedure. Conversely, the patient and family members may openly disagree about the proposed care and treatment plan and may opt to refuse care. It is important that information should be conveyed without coercion, undue influence, or misrepresentation, and in a manner that the patient can understand.
2. Responders must complete the initial patient assessment in keeping with the following standards:
 - a. Complete a general impression
 - b. Assess mental status (Person, Place, Time & Event) and maintain spinal motion restriction as needed
 - c. Assess airway
 - d. Assess breathing
 - e. Assess circulation – pulse, major bleeding, skin colour, and temperature
 - f. Assess disability – movement of extremities
 - g. Expose and examine the head, neck, chest, abdomen and pelvis (check the back when the patient is rolled on their side)
 - h. Identify priority patients

Vital Signs

The guidelines for vital signs are to be used in the context of the patient’s presenting signs and symptoms as “normal” values may vary from patient to patient and in various medical situations.

At a minimum, responders must perform at least 2 sets of vital signs.

Additional sets of vital signs must be performed:

- a. After every medication administration or treatment intervention
- b. Every 15 minutes on critical patients
- c. Every 30 minutes on non-critical patients

A **full set of vitals** is defined as respirations, pulse, blood pressure, SpO₂, temperature and the Glasgow Coma Scale (Refer to the Adult and Pediatric Supplemental Assessment Criteria for details).

Patient Assessments and Diagnostic Tests

ASSESSMENT / DIAGNOSTIC TEST	QUALIFIERS	PATIENT COHORT
Skin	Colour, temperature, Moisture, rash	All Patients
Pupils	Equality, size, reactivity to light	All Patients
Patient Weight	Obtain from patient if possible. Record in Kg	All Patients
Blood Glucose – BGL (4.0 – 11.0 mmol/l)		Patient’s presenting with: <ol style="list-style-type: none"> a. Syncope/Pre-syncope b. Shock c. Seizures d. Suspected infection e. Head injury f. History of diabetes g. Altered LOC h. Stroke i. Cardiac Arrest

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		<ul style="list-style-type: none"> j. Beta Blocker/Ca Channel Blocker k. Consider for abdominal pain l. General malaise
End Tidal CO ₂ – ETCO ₂ (35 – 45 mmHg)	Value and waveform	<p>Patients who:</p> <ul style="list-style-type: none"> a. Have respiratory compromise for ANY reason (e.g. cardiac, overdose) b. Have undergone any airway management c. Undergo procedural sedation d. Consider for post analgesia
Cardiac Monitoring		<p>Patients presenting with:</p> <ul style="list-style-type: none"> a. Chest Pain b. Syncope – Pre-syncope c. Post cardiac arrest ROSC d. Electrocution/Lightning strike e. Dysrhythmias f. Dyspnea g. Overdose or poisoning h. Altered LOC i. Abnormal vital signs j. Congestive heart failure k. Suspicion of septic shock l. Consider for abdominal pain m. Suspected or known cyanide poisoning n. PHI greater than 4 o. Patients who have received medications, such as antiarrhythmics or antipsychotics

Secondary Patient Assessment

Responders must complete a focused secondary patient assessment (head to toe survey) utilizing the applicable patient and system assessments.

Patient Based Assessment

- a. Obstetrical
- b. Neonatal
- c. Pediatric
- d. Geriatric
- e. Psychological/Behavioral

System Based Assessment

- a. Neurologic
- b. Respiratory
- c. Cardiovascular
- d. Gastrointestinal/Genitourinary
- e. Integumentary
- f. Musculoskeletal

Medical History

Responders must obtain the minimum patient history in keeping with the following mnemonic SAMPLE; expand the history as appropriate with further questioning

S – Symptoms; assessment of the chief complaint. If one of the symptoms includes pain expand with:

- O – Onset and location
- P – Provocation
- Q – Quality
- R – Radiation / Region / Referred
- S – Severity
- T – Time

A – Allergies

M – Medications (responders whenever possible collect all patient medications)

P – Past medical history

L – Last oral intake

E – Events leading to illness or injury

Screening for **domestic violence** or other situations of **abuse** has become common practice in Emergency Departments across the province as it is recognized that a patient seeking medical care can be an opportune time to identify these circumstances and ensure patients are connected with the appropriate resources to assist them. First responders have a unique opportunity in many cases to observe an individual in their everyday living situation. Responders should use this opportunity to identify any concerns for all patients.

Wording to patient:

“Violence and the threat of violence in the home is a problem for many people and can affect their health. Abuse takes many forms: physical, emotional, verbal, sexual, financial and neglect. We ask all patients and families about maltreatment and violence in their lives”.

“Is this a concern for you or your children?” Yes/No

“Do you feel safe right now?” Yes/No

Follow-up questions should be asked as necessary. Relay any necessary information during clinical handover so EMS staff is aware and can ensure appropriate resources are arranged for the patient. Steps such as masking patient information in the computer systems to protect patient identity from an abuser can then be taken.

General Patient Management

TREATMENT	QUALIFIERS	PATIENT COHORT
Oxygen	Oxygen is a vasoactive drug and should be used only when indicated. There is evidence that hyperoxia is harmful for certain patients and may negatively impact cardiac output and intracoronary perfusion. Administer only if oxygenation is inadequate (SpO ₂ value of < 94%) or there are signs of increased work of breathing with the aim to maintain SpO ₂ levels between 94% to 98%	Patients presenting with: Shortness of breath Chest pain Syncope/ pre-syncope Altered LOC SpO ₂ less than 94% Arrhythmias PHI of 4 or greater Shock states Suspected or known cyanide poisoning Toxic inhalation
Vascular Access	To Keep Vein Open should be a rate of 30-60 ml/hour Slow IV Push should be over 2-5 minutes IV Push should be 30-60 seconds or as specified in the medication's pharmacology	Patients presenting with: a. Acute GI bleed b. Arrhythmia c. Cardiac arrest d. Chest pain e. Critical burns f. Shock states g. Persistent nausea and vomiting h. Seizure i. Shortness of breath j. PHI of 4 or greater k. Altered LOC l. Overdose or poisoning m. Abdominal pain
Medication Management	Prior to administration of any medications the "7 R's" should be used to verify the correct medication and whenever possible, an Independent double-check must be performed. This is a verification process whereby a second health care professional conducts a verification of another health care professional's	All Patients 7 Rights of Medication Administration: Right patient Right medication Right dose Right time Right route Right purpose

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	<p>completed task. The most critical aspect is to maximize the independence of the double-check by ensuring that the first health care professional does not communicate what he or she expects the second health care professional to see, which would create bias and reduce the visibility of an error.</p> <p>Weight based medication administration is used to determine optimal patient dosing, however, this is based on having an accurate or actual body weight. Evidence has consistently shown that responders err in their estimation of patient weights by about 15%. Conversely, the patient stated weight has been shown to be superior to health practitioner estimates and has an error rate of less than 3%. Estimating the patient weight should only be used if the patient's stated weight is not available. Patient weight is required to be documented on all PCR's and should be recorded in kilograms as weight based calculations are performed in this unit. Rounding of weight based medication calculations, +/- 10% is acceptable from both a patient safety and an ease of administration perspective.</p>	<p>Right documentation</p>
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Online Medical Consultation (OLMC)

Toll Free: 1 (888) 507-8277 **OR** 1 (403) 299-0935

1. Responders requiring medical advice during the course of treating patients should use OLMC immediately after the need has been clinically established.
2. Responders must contact OLMC via a recorded dispatch line or radio. If OLMC cannot be established, practitioners may provide OLMC required treatment if the treatment is clinically indicated, included in the protocol and within the responder's scope of practice. The inability to reach OLMC and the circumstances of the event should be documented on the patient care report.
3. Patients may require care that is an intentional deviation from protocol. Before proceeding with an intentional deviation of care, MFRs must assess the severity of the patient's condition, the scene location and the potential of an adverse patient outcome if the treatment is not immediately provided. In such cases, responders must consult OLMC, ideally prior to providing the care and document the deviation and the rationale in the PCR. Responders should also notify the incoming EMS Crew of the deviation.
4. In situations of poisoning/overdose where responders need additional information not provided in the poisoning/overdose specific MCP's, OLMC is the primary point of contact with the option of additional consultation with the "Poison and Drug Information Service" (PADIS).

On-going Patient Assessment

1. Patient conditions may change unexpectedly and require on-going re-assessment and evaluation which may include:
 - a. Repeat required assessments
 - b. Repeat vitals
 - c. Continuous cardiac monitoring
 - d. Recheck treatment modalities, e.g. O2 flow, IV fluid/medication drip rates, etc

Transfer of Care

Effective communication with EMS staff is a critical part of patient care. Using a standard and concise format helps ensure information is not forgotten during the Clinical Handover. Upon transfer of patient care to another health care provider, responders should provide a verbal report using a clinical handover tool like **iCHAT**.

iCHAT

Meaning	Information to Disseminate
introduction	<ol style="list-style-type: none"> 1. Introduce yourself and scope of practice 2. State your reason for having the conversation (clinical handover) 3. Introduce your patient (name, age, gender)
Current Situation	Chief complaint(s) – reason why the patient called 911 today and circumstances of the current situation
History	Pertinent past medical information
Assessment of Patient	Findings pertinent to chief complaint
Treatment	Given by MFR and patient response to treatment

Whenever possible, and when it is in the best interest of the patient, responders should provide the handover report with the patient in view of the accepting healthcare provider to facilitate patient recognition and encourage assessment as required. It is recognized that extenuating circumstances may make it unacceptable to complete clinical handover in the presence of the patient.

Supplemental Assessment Criteria

Adult

Overview

Responders must use the Standard Approach and On-going Assessment Medical Control Protocol (MCP) for the initial assessment, reassessment and transport of all adult patients.

Vital Signs and Assessment Tools

“Normal” values for vital signs may vary from patient to patient and in various medical situations and should be assessed in the context of the patients presenting signs and symptoms.

Responders must assess the patient’s status in keeping with the same standards for vital signs and diagnostic tests as outlined in the Standard Approach and On-going Assessment MCP

VITAL SIGN (Normal Range)	QUALIFIERS	PATIENT COHORT
Respirations (12 – 20 /min)	Rate, quality	All Patients
Pulse (60 – 100 bpm)	Rate, regularity, quality	All Patients
Blood Pressure (90 – 140 mmHg systolic)	Initial via auscultation	All Patients
Pulse Oximetry – SpO2 (94% - 100%)	SpO2 is unreliable in suspected CO poisoning	All Patients
Temperature (35.5° – 38° C)	Patient temperature will vary dependent on the device used and the ambient temperature	All Patients

Glasgow Coma Scale: To be performed on all adult patients

Eye Opening	Spontaneous	4
	To Voice	3
	To Pain	2
	None	1
Verbal Response	Oriented	5
	Confused	4
	Inappropriate Words	3
	Incomprehensible Sounds	2
	None	1
Motor Response	Obeys Commands	6
	Localize Pain	5
	Withdraw (Pain)	4
	Flexion (Pain)	3
	Extension (Pain)	2
	None	1
Total Glasgow Coma Scale		

Table 1: Glasgow Coma Scale

Pre-Hospital Index: To be performed on all trauma patients

Component	Value	Score
Blood Pressure	Greater than 100	0
	86 - 100	1
	75 - 85	2
	0 - 74	5
Pulse	Greater than 120	3
	50 - 120	0
	Less than 50	5
Respirations	Normal	0
	Labored	3
	Less than 10/min	5
Consciousness	Normal	0
	Confused/Combative	3
	No Intelligible Words	5
Mechanism of Injury (any listed below)		4
MVC – Patient ejected or rollover without seatbelt		
MVC – Death or serious injury to occupant in same vehicle		
MVC – Steering wheel deformed or interior intrusion greater than 45 cm		
Motorcycle Crash – Victim separated from bike at greater than 30 km/h		
Pedestrian / cyclist struck at a velocity of greater than 10 km/h		
Penetrating injury to the head, neck, chest, abdomen or groin		
Fall greater than 3 m		
SCORE: Ranges from 0 – 24, increases with severity		
0 – 3 indicates MINOR TRAUMA		
4 – 24 indicates MAJOR TRAUMA		
		Total Score

Table 2: Adult Pre-Hospital Index (PHI)

Pediatric

Overview

1. Responders must use the Standard Approach and On-going Assessment Medical Control Protocol (MCP) for the initial assessment, reassessment and transport of all pediatric patients.
2. Responders must be aware of the unique attributes encountered in the pediatric population and the challenges that this presents in terms of approaching, assessing and

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treating pediatric patients.

Pediatric Vs. Adult?

For the purpose of prehospital care, a pediatric patient is defined as any person that has not attained sexual maturation; any patient with signs of sexual maturation should be treated as per the Adult Protocols.

Signs of sexual maturation include the following:

- a. Female:
 - i. Breast development
 - ii. Acne
 - iii. Menstruation
 - iv. Pubic hair

- b. Male:
 - i. Body and facial hair
 - ii. Voice change
 - iii. Acne
 - iv. Pubic hair

Pediatric Considerations

1. There are unique challenges in approaching and assessing the pediatric patient, for example:
 - a. Children may have been taught to not trust a stranger which can make gaining their trust difficult
 - b. Injury patterns in children are different than in adults due to their relatively large organs and heads for their body size
 - c. A child's primary emotion is fear

1. Attention to the patient's interactions with parents and/or caregivers and their surroundings will provide some insight as to their condition. Children usually act how they feel. If they are acting like they are in pain, they are in pain. If they are lethargic and not responding appropriately, they are sick.

2. Calmly explain the care and procedures being provided to the patient using a compassionate manner and language that can be understood by the patient.

3. Reassure the patient and parents and/or caregivers that EMS is providing all possible interventions and that these should bring relief to the patient; acknowledge the feelings of the parent and/or caregiver.

4. Respect the patient's privacy:
 - a. Arrange for care to be provided privately as necessary
 - b. Respect request for privacy of personal information and if appropriate, use discretion in sharing information with parents and/or caregivers
 - c. Respect the patient's request to contact (or not contact) parents and/or caregivers so long as this does not contraindicate the stipulations of the Health Information Act.

6. Minor/Mature Minor Consent for Treatment:
 - a. A patient under the age of 18 years is presumed to be a minor patient and lacks decision making capacity and consent for treatment must be provided by their guardian or legal representative.
 - b. A patient under the age of 18 years may be assessed and determined to be a mature minor. The assessment by the health practitioner must take into consideration the patient's age, intelligence, maturity, the seriousness of the treatment or intervention, and independence from parenteral control. It is a combination of these factors rather than meeting any single one that will lead the health practitioner to determine an opinion on mature minor status. Once a mature minor status has been established the mature minor is able to make their own medical decisions including overriding the decision of their legal representative.
 - c. Refusal or withdrawal of care by a patient's legal representative or by a mature minor for essential medical treatment must be immediately reported to the Director of Child, Youth, and Family Services Authority as per provincial legislation. For further details refer to Consent for Treatment Procedure Minor/Mature Minor

Age Considerations

Responders must be sensitive and aware of the needs of different age groups and in all cases treat the patient in a dignified, honest and respectful manner.

1. Birth to 6 months
 - a. Have not yet learned to be afraid of strangers
 - b. Have a strong, loud cry and are constantly in motion when awake and alert
 - c. Can usually be consoled by being held or with a pacifier or toy
 - d. Are abdominal breathers and have relatively shallow respirations at rest
 - e. Should be assessed from toe to head in order to avoid increased agitation unless their ABCs are compromised

2. 6 months to 3 years
 - a. Are the most difficult age group to assess because of their fear of strangers; they are very attached to their mothers and/or primary caregivers and can become extremely agitated if separated from them

Medical First Response

- b. Should be approached at their level; try to talk to the child with a low voice prior to approaching them as this will help ease some of the fear and anxiety that a stranger creates
 - c. May allow you to do more if the parent and/or caregiver is helping; it may be advantageous to allow a parent and/or caregiver to assist with your exam (e.g. have parent and/or caregiver put on a BP cuff or hold the stethoscope to the child)
3. 3 to 10 years
 - a. May be egocentric and have many fears about pain and body image
 - b. Can communicate well, but when in a stressful situation, may revert back to acting like a toddler
 - c. Can understand when things are explained to them; use clear language that is appropriate to their age and avoid using metaphors, as this age group takes things literally
 - d. Explain procedures prior to performing them; do not lie or make unrealistic promises to this age group - if trust is lost it may be impossible to gain back
 - e. Avoid questions that can be answered with, “no”
 4. 10 years and older
 - a. Assessment will be similar to that of an adult patient
 - b. Have a higher level of understanding and ability to reason
 - c. May be better to interview this group in private away from parents and/or caregivers as they may be uncomfortable or shy answering questions in front of them

Initial Pediatric Patient Assessment

Allow a parent and/or caregiver to hold the child during assessment and care if this is comforting to the patient and does not interfere with the provision of care.

Be alert for signs of possible abuse or neglect. Responders must immediately report any suspected cases of child abuse or neglect, in accordance with the Child, Youth and Family Enhancement Act.

The initial impression can be accomplished within seconds of encountering the pediatric patient. The preliminary visual and auditory observation of the pediatric's consciousness, breathing and color will determine the severity of illness / injury in the pediatric patient.

1. Consciousness –Level of Consciousness
 - a. Alert
 - b. Irritable
 - c. Unresponsive

2. Breathing
 - a. Increased work of breathing
 - b. Absent or decreased respiratory effort
 - c. Abnormal sounds heard without auscultation

3. Colour - Abnormal Skin Color
 - a. Pale
 - b. Cyanotic
 - c. Mottling

Table 1: Signs Indicating Severity of Illness in Children from Birth to 6 Months

Physical Sign	Normal	Moderately Ill	Seriously Ill
Color	Pink	Pale	Mottled, cyanotic
Hydration	Moist mucous membranes, good skin turgor, flat fontanels, light-coloured urine	Sticky mucous membranes, slightly doughy skin turgor, slightly sunken fontanels, dark-coloured urine	Dry mucous membranes, tenting skin turgor, depressed fontanels, sunken eyes, no urine
Response to Stimulation	Rouses easily, then stays awake and alert	Rouses to repeated gentle stimulation, may fall back to sleep quickly when stimulus stops	Rouses only with aggressive or irritating stimulation, or does not arouse at all
Behavior	Unchanged	Fussy, but can be comforted	Irritable and inconsolable if awake
Cry	Unchanged	Whimpers, sobs, or whines	High pitched and screeching, or weak and moaning

Pediatric Vital Signs and Assessment Tools

Responder must assess the pediatric patient's status in keeping with the same standards for vital signs and diagnostic tests as outlined in the Standard Approach and On-going Assessment MCP

Table 2: Pediatric Vital Signs

Less than 1 year of age:

Age	Weight (kg)	Systolic BP(mmHg)	Normal Heart Rate (bpm)	Normal Respiratory Rate (/minute)
Neonate	3.5	60-76	110-160	35-60
3 months	6	78-103	100-150	35-55
6 months	8	82-105	100-140	35-50

1 year of age or greater:

Age (years)	Weight (kg) 8 + (2 x age)	Systolic BP* (mmHg)	Normal Heart Rate (bpm)	Normal Respiratory Rate (/minute)
1	10	86	100-130	30-50
6	20	95	70-100	18-30
10	28	103	65-100	12-25

*50th Percentile values

Normal temperature values are dependent on the device but it is generally accepted that a temperature of 38° C or higher represents a fever (normal range of 35.5° – 37.5° C).

SPO2 values are considered normal when within the range of 94% - 100%.

Glasgow Coma Scale score equals the sum of best eye opening, motor, and verbal responses; range is 3 – 15.

Minimum blood pressure calculations:

Systolic Blood Pressure: $70 + (2 \times \text{Age})$

Mean Arterial Pressure: $70 + (1.5 \times \text{Age})$

Table 3: Pediatric Glasgow Coma Scale (GCS)

Score	Less than 1 Year		1 Year or Greater
Eye-Opening Response			
4	Spontaneous		Spontaneous
3	To shout		To verbal command
2	To pain		To pain
1	None		None
Motor Response			
6	Displays spontaneous response		Obeys commands
5	Localizes pain		Localizes pain
4	Withdraws from pain		Withdraws from pain
3	Displays abnormal flexion to pain (decorticate rigidity)		Displays abnormal flexion to pain (decorticate rigidity)
2	Displays abnormal extension to pain (decerebrate rigidity)		Displays abnormal extension to pain (decerebrate rigidity)
1	None		None
Verbal Response			
Score	0 – 23 Months	2 – 5 Years	5 Years or Greater
5	Babbles, coos appropriately	Uses appropriate words and phrases	Is oriented and converses
4	Cries, but is consolable	Uses inappropriate words	Conversation is confused
3	Cries or screams persistently to pain	Cries or screams persistently to pain	Words are inappropriate
2	Grunts or moans to pain	Grunts or moans to pain	Sounds are incomprehensible
1	None	None	None

Broselow Tape

The Broselow Tape relates a child’s height as measured by the tape to his/her weight to provide medical instructions that includes medication dosages, the size of equipment that should be used and cardioversion and defibrillation levels. The Broselow Tape is designed for children up to approximately 12 years of age who have a maximum weight of 36 Kg. There

have been a small number of inconsistencies identified when comparing the weight based drug dosages on the Broselow Tape and those found in the MCP's, consequently, medication type, route of administration, and dose should always be taken from the MCP's. The use of the Broselow Tape should be reserved for weight estimation only.

Obtaining the Pediatric Medical History – Special Considerations

Responders must obtain the minimum patient history in keeping with the mnemonic SAMPLE as outlined in the Standard Approach and On-going Assessment: expand the history as appropriate with further questioning. History may be difficult to obtain; use parents and/or caregivers as appropriate.

- Consider possibility of overdose on family member's medications
- Include pediatric specific history such as:
 - Full term/premature
 - Immunization and possible exposure to childhood diseases
 - Sleep history
 - Hydration – frequency of feeding and volume
 - Output – frequency of diaper changes