Advanced Life Support Patient Care Standards

Version 5.3

Comes into force
February 9, 2024

Emergency Health
Regulatory and
Accountability Branch
Ministry of Health

Ontario

To all users of this publication:

The information contained in this standard has been carefully compiled and is believed to be accurate at date of publication.

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Document Control

Version Number	Date of Issue	Comes into Force Date	Brief Description of Change
3.1	N/A	November 2013	Existing document
3.2	Retired	Retired	Retired
3.3	April 20, 2015	February 1, 2016	Finalized version 3.3
3.4	October 2016	February 1, 2017	Full update to Appendix 6 / retitled: Certification Standard.
4.0	October 2016	N/A (amended prior to in force date)	Full update.

4.0.1	November 2016	N/A (amended prior to in force date)	Update to Nausea/Vomiting Medical Directive – AUXILIARY (ACP): Weight condition changed from "<25 kg", to "≥25 kg".
4.1	November 2016	N/A (amended prior to in force date)	Version 4.0.1 with the addition of the Emergency Childbirth Medical Directive.
4.2	May 2017	N/A (amended prior to in force date)	Updates to Emergency Childbirth Medical Directive, Suspected Adrenal Crisis Medical Directive, and various housekeeping edits (e.g. IV provisions)
4.3	July 2017	July 17, 2017	Amends 4.0.1. Change in the "Age" Condition for naloxone from ≥ 18 years to ≥ 12 years and change to epinephrine concentration labeling.
4.4	July 2017	December 11, 2017	Amends 4.2. Change in the "Age" Condition for naloxone from ≥ 18 years to ≥ 12 years and change to epinephrine concentration labeling.
4.5	April 2018	May 1, 2018	Updates to the Combative Patient Medical Directive. Addition of Analgesia Medical Directive and Emergency Tracheostomy Tube Reinsertion Medical Directive to the auxiliary appendices.
4.6	September 2019	September 3, 2019	Minor housekeeping Migration of Analgesia Medical Directive and Emergency Tracheostomy Tube Reinsertion Medical Directive from "Auxiliary" to "Core" appendices. Addition of the Research Trial Standard.
4.6.1	October 2019	October 23, 2019	Amends version 4.6 to correct table formatting and branch name.
4.7	April 8, 2020	April 8, 2020	Addition of the auxiliary "Assessment of Patients with Possible COVID-19" Medical Directive.

4.8	November 9, 2020	November 23, 2020	Updates to the following Medical Directives: Moderate to Severe Allergic Reaction, Suspected Adrenal Crisis, added Endotracheal and Tracheostomy Suctioning & Reinsertion, Intravenous and Fluid Therapy, Pediatric Intraosseous, Intravenous and Fluid Therapy – (AUX), Adult Intraosseous – (AUX), Assessment of Patients with Possible COVID-19 – (AUX)
4.9	December 20, 2021	February 1, 2022	Minor changes and alignments to Cardiac ischemia, Hypoglycemia, Analgesia, Opioid Toxicity, directives
5.0	November 28, 2022	~~February 1, 2023~~ **Replaced with version 5.1**	Updates to the following directives: Medical and Trauma cardiac arrest, Newborn resuscitation, Bronchoconstriction, Croup, Emergency childbirth, Tension pneumothorax, Combative patient, Supraglottic airway, Nausea/vomiting, Central venous access device, Procedural sedation, and certification standard. Removal of ECD directive. Update document format to current visual identity requirements.
5.1	January 2023	February 1, 2023	Addition of Patient Care Models treat and discharge auxiliary medical directives: Hypoglycemia, Seizure and Tachydysrhythmia. Minor edits to the preamble.
5.2	July 10, 2023	July 10, 2023	Update to: Document Preamble, Opioid Toxicity Medical Directive, and migration and update of chemical exposure directives to Auxiliary sections. The order of directives has been updated to align with the OBHG books and app.
5.2.1	January 10, 2024	January 10, 2024	ACP & PCP Pediatric Nerve agent exposure medical directive atropine & pralidoxime dose correction.
5.3	February 9, 2024	February 9, 2024	Updates to the PCP & ACP Hypoglycemia medical directives.

Table of Contents

Advanced Life Support Patient Care Standards

Version 5.3

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Preamble

Preamble

Levels of Paramedics

In Ontario, there are 3 levels of qualification for paramedics which lead to Certification as a: Primary Care Paramedic (PCP), Advanced Care Paramedic (ACP), and Critical Care Paramedic (CCP). The qualification for each are set out in Ontario Regulation 257/00 made under the *Ambulance Act*, RSO 1990, c A-19. The qualifications for each include a requirement that the paramedic be authorized by a Medical Director of a Regional Base Hospital (RBH) to perform the controlled acts set out in Schedules 1, 2 and 3 to O. Reg. 257/00.

A paramedic may be authorized by the Medical Director to perform controlled acts from the Schedule immediately above their Certification. In this circumstance, the paramedic is required to perform the controlled act to a specific standard as set out in the *Advanced Life Support Patient Care Standards* (ALS PCS). All advanced medical procedures that are not listed as controlled acts in Schedules 1, 2 and 3, shall also be performed as set out in the ALS PCS.

Purpose of Standards

The ALS PCS reflects current practices for paramedics in Ontario and provides benchmarks for paramedic performance. It also communicates the standards of practice and care by paramedics in Ontario to paramedics, patients, other disciplines and the public in general.

In the provision of ALS PCS care, paramedics are required to ensure patient care and documentation is provided in accordance with all appropriate Standards as indicated in O. Reg. 257/00.

Comprehensive Care

Although two patient care standards exist, both Standards represent a continuum of care that is to be followed in an integrated fashion during a call for service. While initiating and continuing treatment prescribed by these Medical Directives, a paramedic must ensure that the patient simultaneously receives care in accordance with the BLS PCS. It is acknowledged that there may be circumstances and situations where complying with ALS PCS is not clinically justified, possible, or prudent (*e.g.* multiple crews on scene, trapped patient, extenuating circumstances, competing patient care priorities). When treatment deviates from the standards, a paramedic must document the care provided, including reasoning for deviating from the ALS PCS.

Format of the ALS PCS

This document is comprised of a Preamble section and six (6) sections: Section 1 – PCP Core Medical Directives; Section 2 – ACP Core Medical Directives; Section 3 – PCP Auxiliary Medical Directives; Section 4 – ACP Auxiliary Medical Directives; Section 5 – Certification Standard, and Section 6 – Research Trial Standard.

Use of the Medical Directives by Paramedics

These Medical Directives apply to paramedics who are authorized by a RBHP Medical Director to provide patient care. Delegation of controlled acts in the ALS PCS to paramedics falls under the exclusive oversight of the RBHP. Critical Care Paramedics, Flight Paramedics and Alternate Healthcare Providers will perform controlled acts in accordance with the Base Hospital (RBHP) Medical Directives issued by the Ornge Base Hospital Medical Director(s).

General Structure of a Medical Directive

All Medical Directives follow the same format and are comprised of the following sections:

Indications:

The general medical complaint or problem to which the Medical Directive applies.

Conditions:

Clinical parameters that must be present for a procedure to be performed or for a medication to be administered.

Contraindications:

Clinical parameters that if present, preclude the performance of a procedure or the administration of a medication.

Treatment:

Description of the type of procedure to be performed or the dosing of a medication.

Clinical Considerations:

Key clinical points that provide general guidance to the proper performance of a procedure or the administration of a medication.

All of these sections must be taken into account before and during the implementation of a Medical Directive.

Auxiliary Medical Directives

Additional ("Auxiliary") controlled medical acts or advanced medical interventions may be delegated through use of the Auxiliary Medical Directives. Delegation of Auxiliary Medical Directives by a RBHP Medical Director to paramedics is optional and may be introduced after consultation and mutual agreement between the RBHP and the certified ambulance service that employs the paramedic. Some PCP and ACP Medical Directives contain the phrase, "(if available and authorized)". This phrase qualifies the

skill or procedure as optional (*i.e.* auxiliary) even if included in PCP or ACP Medical Directives.

Special Event Medical Directives

Medical Directives have been developed for time limited periods when a mass gathering could potentially strain the resources of the host community. These medical directives shall only be used by paramedics who have completed the necessary training and received Regional Base Hospital Program authorization.

Consent to Treatment in Non-Emergency Situations

Except in emergency circumstances described below, paramedics shall obtain consent prior to administering treatment. If a patient is incapable of consenting to the treatment plan being proposed by a paramedic, consent may be given or refused on his or her behalf by the patient's substitute decision-maker (SDM). Consent may be expressed or implied. Implied consent may be assumed where a person provides a physical indication that they consent to the treatment plan being proposed. For example, a patient who cannot speak but extends his hand to a paramedic after the paramedic indicates she is going to perform a simple procedure, such as a blood glucose determination, may be giving implied consent to the treatment plan being proposed.

The elements required for consent to treatment are:

a) consent must be given by a person who is capable of giving consent with respect to the treatment plan;
b) consent must relate to the treatment plan;
c) consent must be informed;
d) consent must be given voluntarily; and
e) consent must not be obtained through misrepresentation or fraud.

Consent to the treatment plan is informed if, before it is given by the person, he or she has:

a) received the following information that a reasonable person in the same circumstances would require in order to make a decision about the treatment plan:
    i. the nature of the treatment;

ii. the expected benefits of the treatment;
iii. the material risks of the treatment;
iv. the material side effects of the treatment;
v. alternative courses of action;
vi. the likely consequences of not having the treatment; and

b) received responses to his or her requests for additional information about those matters.

Valid consent requires that a person has the capacity to provide consent. A person is presumed to have the capacity to provide consent with respect to treatment and a paramedic may rely on that presumption unless the paramedic has reasonable grounds to believe that the person is incapable with respect to the treatment plan. A paramedic must perform a capacity assessment if it is not reasonable in the circumstances to presume the person is capable of consenting to the treatment plan.

A patient is capable with respect to the treatment plan if the patient is:

a) Able to **understand** the information that is relevant to making a decision about the treatment or alternatives being proposed; **and**
b) Able to **appreciate** the reasonably foreseeable consequences of a decision or lack of decision with respect to the treatment plan.

If a patient is incapable of consenting to a proposed treatment plan, and the paramedic is aware or is made aware that the person has a prior capable wish with respect to the proposed treatment, they must respect that wish (for example, if the person does not wish to be resuscitated).

Consent to Treatment in Emergency Situations

Where the person for whom the treatment is being proposed is apparently experiencing severe suffering or is at risk of sustaining serious bodily harm if the treatment is not administered promptly, it is considered to be an emergency.

For situations involving consent to treatment in emergency situations, a paramedic shall comply with the applicable directions contained in the *Basic Life Support Patient Care Standards* (BLS PCS).

Discharge from Care

If a paramedic is certified and authorized by their Regional Base Hospital to perform a prehospital discharge from care as per the applicable Medical Directives, the following applies. For the purpose of the applicable Medical Directives, a patient or substitute decision maker (SDM) present at the scene, must be capable to make an informed decision about their treatment plan.

A paramedic authorized to perform a prehospital discharge from care shall:

1. Determine whether a patient may be treated in accordance with the Treat and Discharge component of the applicable Medical Directive,
2. Communicate a clinically reasonable differential diagnosis to the patient or SDM,
3. Discuss the following elements of a discharge treatment plan:
    a. The clinical situation related to the most likely diagnosis and/or differential diagnoses,
    b. The symptoms and signs alerting them to seek further medical care (i.e. clues that the condition is worsening or that the diagnosis may not be correct),
    c. Instructions regarding modifications(s) of activities of daily living following the health event,
    d. Where possible, provide additional contacts for follow up care,
    e. Instructions to call 911 back if their condition worsens or recurs, and
4. Ensure the patient has the necessary support to follow a discharge treatment plan. These supports may include:
    a. access to food,
    b. access to transportation,
    c. access to alternate health care follow up,
    d. a safe place to stay,
    e. responsible adult at the scene available to monitor the patient, and
    f. consideration of other apparent patient vulnerabilities.

Refusal of Treatment

If a patient refuses treatment, either in whole or in part, a paramedic shall comply with the applicable directions contained in the BLS PCS.

Intravenous (IV) Access and Therapy by Primary Care Paramedics

There are 2 types of authorization for PCPs IV cannulation and therapy.

"PCP Assist IV" is authorization for a PCP to cannulate a peripheral IV at the request and under the direct supervision of an ACP. The patient must require a peripheral IV in accordance with the indications listed in the Intravenous and Fluid Therapy Medical Directive - Auxiliary. The ACP will perform all IV therapy in accordance with the Intravenous and Fluid Administration Medical Directive once intravenous access is obtained. PCPs authorized in PCP Assist IV are not authorized to administer IV therapy.

This authorization level can no longer be obtained and only those who have previously received this authorization may continue to practice at this level.

"PCP Autonomous IV" is authorization for a PCP to independently cannulate an IV according to the Intravenous and Fluid Therapy Medical Directive – Auxiliary. PCPs authorized in PCP Autonomous IV are authorized to administer IV therapy according to applicable Medical Directives.

Authorization for each type shall meet the requirements established by the OBHG MAC.

Home Medical Technology and Novel Medications

As community care advances, new home medical technologies and novel medications are being introduced for home use by patients and caregivers trained in the care required. They are generally used by patients with complex medical histories who may require emergent interventions which are not described in, or aligned with, the BLS PCS or ALS PCS.

A "home medical technology" is an external or internal mechanical device prescribed by a member of a regulated health profession for the purpose of treating a medical condition.

A "novel medication" is a self/caregiver-administered medication prescribed by a member of a regulated health profession that is required to treat patients with generally rare and unusually complex chronic medical conditions which are often end stage. The medication may be self/caregiver-administered by any route into any part of the body.

A paramedic may accept the claim that a patient or caregiver has knowledge and training about the technology or medication encountered. A paramedic may only assist a patient or caregiver within the authorized paramedic skill set.

For unusual circumstances requiring interventions in the out of hospital setting, the RBH may create local training modules, treatment guidelines or medical directives.

Patching

A paramedic shall patch to the Base Hospital when:

a) a medical directive contains a mandatory provincial patch point; **OR**
b) for situations that fall outside of these Medical Directives where the paramedic believes the patient may benefit from online medical direction that falls within the prescribed paramedic scope of practice; **OR**
c) for consultation when, in the paramedics opinion the patient presentation or situation warrants and medical advice is required.

In cases where a treatment option requires the prior authorization by the BHP AND the BHP cannot be reached despite reasonable attempts by the paramedic to establish contact, a paramedic may initiate the required treatment without the requisite online authorization if the patient requires a critical, potentially life-saving, intervention and, in the paramedic's opinion, the intervention would otherwise apply. All patch failures must be reported in a timely manner to the RBHP in accordance with local policy and procedures. Paramedics should document the attempts to patch to the BHP on the Ambulance Call Report (ACR).

If a BHP directs a paramedic to perform an assessment or intervention that exceeds the paramedic's scope of practice, the paramedic must advise the BHP of such and notify the physician that they cannot comply with the direction as it exceeds their scope of practice. In such cases, a paramedic should ask the BHP to provide alternative direction.

Incident Reporting

Paramedics shall adhere to their ambulance service policies and the *Ontario Ambulance Documentation Standards* (incorporated by reference in Ontario Regulation 257/00) for incident reporting. Paramedics shall also adhere to additional RBHP policies regarding reporting of clinical care incidents to the RBHP.

Responsibility for Care

Each paramedic is equally responsible for patient care within their scope of practice. If the care exceeds a paramedics scope of practice, responsibility for that continued care shifts to the higher certified paramedic.

If there is any disagreement between paramedics, the Base Hospital physician may be contacted. It is expected that when an intervention has been performed, the paramedic most appropriate for that intervention will remain responsible for the patient.

The risks to the patient during transport should be assessed and discussed prior to transferring care from a higher to lower level of paramedic (e.g.: ACP to PCP), paramedics must alert the highest-level paramedic of any change of patient status at any time in the call.

When transferring care from one level of paramedic to another, paramedics shall provide:

a) current CTAS level;
b) a history of the patient's current problem(s) and relevant past medical history;
c) pertinent physical findings;
d) a summary of management at scene/en route;
e) the patient's response to treatment, including most recent vital signs; and
f) the reason for transfer in cases of inter-facility transfers.

The transfer of responsibility of patient care is a critical juncture along the clinical care continuum. When transferring patient care to another health care provider (*e.g.* nurse, physician, *etc.),* a paramedic must comply with the BLS PCS regarding such transfers.

Research

Clinical research is fundamental to the practice of medicine and the development of safer, more effective treatment options for patients. At times, research protocols require temporary changes to patient care standards. Changes to patient care standards will be approved and introduced by the MOH.

Patient Care Model

Any patient care model subject to The Patient Care Model Standard (PCMS) requires approvals and training as per the PCMS. Paramedics shall assess and provide treatment to all patients in accordance with the ALS PCS and BLS PCS when patients do not completely meet the specific parameters of approved Patient Care Models.

Conventions

"Conventions" refers to a consistent application of terms throughout the Medical Directives based on definitions below.

The word 'consider' is used repeatedly throughout the Medical Directives. Where this word appears, it indicates that a paramedic shall initiate the treatment when the indications are first identified unless there is strong clinical rationale to withhold or delay treatment or other extenuating circumstances. A paramedic must document his or her justification for withholding treatment on the ACR.

Medication Doses and Administration

Unless specified within the medical directive, the number of recommended medication doses may be administered regardless of any previous administrations. When more than one route of medication administration is listed, clinical circumstances for each case should determine the final route chosen.

When more than one route of medication administration is listed, the order of preference for route of administration is from left to right. Clinical circumstances for each case should determine the final route chosen.

Pediatric medication doses can vary slightly according to the source of expert opinion. The pediatric medication doses in the ALS PCS are the preferred doses. However, medication doses as determined by an up-to-date version of a widely accepted RBHP approved pediatric emergency tape (*e.g.* Broselow Tape) are an acceptable alternative. Use of a pediatric emergency tape shall be documented on the ACR when it is used to determine a pediatric medication dose.

Medication doses may be calculated based upon weight or other factors and result in a fraction that cannot be measured accurately. In these cases, the medication dose delivered will be rounded to the closest dose that can accurately be measured.

Age and Vital Signs

The general age cut off between adults and pediatrics is 18 years (under 18 yrs. is generally considered a pediatric patient). There is a wide range of "normal" for vital signs in adults and especially pediatrics. As much as possible, ages for pediatrics and cut off points for vital signs have been kept consistent throughout the Medical Directives. However, clinical research and expert opinion have resulted in a number of exceptions which in each case has been deliberately chosen and is clearly noted in each Medical Directive. Age will be written as a number of hours, days or years throughout the medical directives. There is a deliberate gap in the definition of normotension and hypotension in adults.

Adults

Normotension

SBP ≥ 100 mmHg

Hypotension

SBP < 90 mmHg

Heart rate

Heart rate is always in beats per minute according to a cardiac monitor when it is applied. In situations where a cardiac monitor is not indicated then the heart rate is equal to the pulse rate.

Bradycardia

HR < 50 BPM

Tachycardia

HR ≥ 100 BPM

Tachypnea

RR ≥ 28 breaths/min

Pediatrics

Age	Respiratory Rate	Heart Rate
0-3 months	30-60	90-180
3-6 months	30-60	80-160
6-12 months	25-45	80-140
1-3 yr	20-30	75-130
6 yr	16-24	70-110
10 yr	14-20	60-90

Normotension

SBP ≥ 90 mmHg + (2 x age in years)

Hypotension

SBP < 70 mmHg + (2 x age in years)

Weight (kg)

= (age x 2) + 10

Hypoglycemia

Age	Blood glucose level
< 2 yr	< 3.0 mmol/L
≥ 2 yr	< 4.0 mmol/L

Level of Awareness (LOA)

The word 'altered' refers to a GCS that is less than normal for the patient.

The word 'unaltered' refers to a GCS that is normal for the patient. This may be a GCS <15.

Commonly Used Abbreviations

Table 1 below outlines abbreviations commonly used in the ALS PCS.

Table 1. Abbreviations commonly used in the ALS PCS

Word/Phrase	Abbreviation
A	
Advanced Care Paramedic	ACP
Advanced Life Support	ALS
Advanced Life Support Patient Care Standards	ALS PCS
Acetylsalicylic acid	ASA
As needed	PRN
Automated external defibrillation	AED
B	
Base Hospital Physician	BHP
Basic Life Support Patient Care Standards	BLS PCS
Beats per minute	BPM
Bag-valve-mask	BVM
By mouth/oral	PO
C	
Critical Care Paramedic	CCP
Chronic obstructive pulmonary disease	COPD
Clinical Opiate Withdrawal Scale	COWS
Centimetre	cm
Continuous positive airway pressure	CPAP
Cardiopulmonary Resuscitation	CPR

Canadian Triage and Acuity Scale	CTAS
Cerebral vascular accident	CVA
Central venous access device	CVAD
D	
Diabetic ketoacidosis	DKA
Do Not Resuscitate	DNR
Drops	gtts
E	
Electrocardiogram	ECG
Emergency department	ED
End tidal carbon dioxide	$ETCO_2$
Endotracheal tube	ETT
Every	q
F	
Fraction of inspired oxygen	FiO2
G	
Gram	g
Glasgow Coma Scale	GCS
H	
Heart Rate	HR
History	Hx
Hydrofluoric acid	HF
I	
Intramuscular	IM
Intranasal	IN
Intraosseous	IO

Intravenous	IV
J	
Joule	J
K	
Kilogram	kg
L	
Level of awareness	LOA
Level of consciousness	LOC
M	
Maximum	Max.
Metered dose inhaler	MDI
Microgram	mcg
Milligram	mg
Milliseconds	ms
Minimum	Min.
Minute	min
Millilitre per kilogram	ml/kg
Millimetres of mercury	mmHg
Ministry of Health	MOH
N	
Not applicable	N/A
Nostril	nare
Nebulized	NEB
Nasopharyngeal airway	NPA
Non-steroidal anti-inflammatory drug	NSAID

O	
Ontario Base Hospital Group-Medical Advisory Committee	OBHG-MAC
Oropharyngeal airway	OPA
P	
Primary Care Paramedic	PCP
Positive Pressure Ventilation	PPV
Pulseless electrical activity	PEA
R	
Regional Base Hospital Program	RBHP
Return of spontaneous circulation	ROSC
Respiratory rate	RR
S	
Semi-Automated external defibrillation	SAED
Sodium chloride	NaCl
Subcutaneous	SC
Sublingual	SL
Systolic blood pressure	SBP
Saturation of peripheral oxygen	
ST-segment elevation myocardial infarction	STEMI
T	
Topical	TOP
Termination of Resuscitation	TOR
Traumatic brain injury	TBI
Transcutaneous pacing	TCP

U	
Upper respiratory tract infection	URTI
V	
Ventricular Fibrillation	VF
Ventricular Tachycardia	VT
Vital signs absent	VSA
W	
Water	H2O
Within normal limits	WNL

Reference and Educational Notes

The RBHPs have created a companion document of reference and educational notes intended to assist paramedics in implementing these Medical Directives. This will facilitate regular updating of these notes without having to issue frequent changes to the standards. It is expected that paramedics have mastered the relevant information as part of initial training and certification and have maintained their knowledge through continuing education and self assessment and reflective practice. The reference and educational notes do not define a standard of care and is not a nested document to this standard; however, they should be considered useful in ensuring that an appropriate standard of care is met.

Section 1 – PCP Core Medical Directives

1

Supraglottic Airway Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Need for ventilatory assistance or airway control;

AND

Other airway management is ineffective.

Conditions

Supraglottic Airway	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Absent gag reflex

Contraindications

Supraglottic airway
Airway obstructed by a foreign object
Known esophageal disease (varices)
Trauma to the oropharynx
Caustic ingestion

Treatment

Consider supraglottic airway insertion
The maximum number of supraglottic airway insertion attempts is 2.

Confirm supraglottic airway placement	
Method	**Method**
Primary	*Secondary*
$ETCO_2$ (Waveform capnography)	$ETCO_2$ (Non-waveform device)
	Auscultation
	Chest rise

Clinical Considerations

An attempt at supraglottic airway insertion is defined as the insertion of the supraglottic airway into the mouth.

Confirmation of supraglottic airway should use $ETCO_2$ (Waveform capnography). If waveform capnography is not available or is not working, then at least 2 secondary methods must be used.

Bronchoconstriction Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Respiratory distress;

AND

Suspected bronchoconstriction.

Conditions

salbutamol	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

EPINEPHrine	
Age	N/A
Weight	N/A
LOA	N/A
HR	N/A
RR	BVM ventilation required
SBP	N/A
Other	Hx of asthma

	dexamethasone
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Hx of asthma **OR** COPD **OR** 20 pack-year history of smoking

Contraindications

salbutamol
Allergy or sensitivity to salbutamol

EPINEPHrine
Allergy or sensitivity to EPINEPHrine

dexamethasone
Allergy or sensitivity to steroids
Currently on PO or parenteral steroids

Treatment

Consider salbutamol	Weight < 25 kg		Weight ≥ 25 kg	
	Route MDI*	**Route** NEB	**Route** MDI*	**Route** NEB
Dose	Up to 600 mcg (6 puffs)	2.5 mg	Up to 800 mcg (8 puffs)	5 mg
Max. single dose	600 mcg	2.5 mg	800 mcg	5 mg
Dosing interval	5-15 min PRN	5-15 min PRN	5-15 min PRN	5-15 min PRN
Max. # of doses	3	3	3	3

***1 puff=100 mcg**

Consider EPINEPHrine	Route IM
	Concentration 1 mg/mL = 1:1,000
Dose	0.01 mg/kg*
Max. single dose	0.5 mg
Dosing interval	N/A
Max. # of doses	1

***The EPINEPHrine dose may be rounded to the nearest 0.05 mg**

Consider dexamethasone	Route PO/IM/IV
Dose	0.5 mg/kg
Max. single dose	8 mg
Dosing interval	N/A
Max. # of doses	1

Clinical Considerations

EPINEPHrine should be the 1st medication administered if the patient is apneic. Salbutamol MDI may be administered subsequently using a BVM MDI adapter.

Nebulization is contraindicated in patients with a known or suspected fever or in the setting of a declared febrile respiratory illness outbreak by the local medical officer of health.

When administering salbutamol MDI, the rate of administration should be 100 mcg approximately every 4 breaths.

A spacer should be used when administering salbutamol MDI.

Moderate to Severe Allergic Reaction Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Exposure to a probable allergen;

AND

Signs and/or symptoms of a moderate to severe allergic reaction (including anaphylaxis).

Conditions

EPINEPHrine	
Age	N/A
Weight	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	For anaphylaxis only

diphenhydrAMINE	
Age	N/A
Weight	≥ 25 kg
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

EPINEPHrine
Allergy or sensitivity to EPINEPHrine

diphenhydrAMINE
Allergy or sensitivity to diphenhydramine

Treatment

Consider EPINEPHrine	
	Route IM
	Concentration 1 mg/mL = 1:1,000
Dose	0.01 mg/kg*
Max. single dose	0.5 mg
Dosing interval	Minimum 5 min
Max. # of doses	2

***The EPINEPHrine dose may be rounded to the nearest 0.05 mg**

Consider diphenhydrAMINE		
	Weight ≥ 25 kg to < 50 kg	**Weight** ≥ 50 kg
	Route IV/IM	**Route** IV/IM
Dose	25 mg	50 mg
Max. single dose	25 mg	50 mg
Dosing interval	N/A	N/A
Max. # of doses	1	1

Clinical Considerations

EPINEPHrine administration takes priority over IV access.

IV administration of diphenhydrAMINE applies only to PCPs authorized for PCP Autonomous IV.

Croup Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Current history of URTI;

AND

Barking cough or recent history of a barking cough

Conditions

EPINEPHrine	
Age	≥ 6 months to < 8 years
LOA	N/A
HR	< 200 bpm
RR	N/A
SBP	N/A
Other	Stridor at rest

dexamethasone	
Age	≥ 6 months to < 8 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	For mild, moderate and severe croup

Contraindications

EPINEPHrine
Allergy or sensitivity to EPINEPHrine

dexamethasone
Allergy or sensitivity to steroids
Steroids received within the last 48 hours
Unable to tolerate oral medications

Treatment

Consider EPINEPHrine		
	Weight < 10 kg	**Weight** ≥ 10 kg
	Route NEB	**Route** NEB
	Concentration 1 mg/mL = 1:1,000	**Concentration** 1 mg/mL = 1:1,000
Dose	2.5 mg	5 mg
Max. single dose	2.5 mg	5 mg
Dosing interval	N/A	N/A
Max. # of doses	1	1

Consider dexamethasone	
	Age ≥ 6 months to < 8 years
	Route PO
Dose	0.5 mg/kg
Max. single dose	8 mg
Dosing interval	N/A
Max. # of doses	1

Clinical Considerations

N/A

Endotracheal and Tracheostomy Suctioning & Reinsertion Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Patient with endotracheal or tracheostomy tube

AND

Airway obstruction or increased secretions.

Conditions

Suctioning	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Emergency tracheostomy reinsertion	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Patient with an existing tracheostomy where the inner and/or outer cannula(s) have been removed from the airway **AND** Respiratory distress **AND** Inability to adequately ventilate **AND** Paramedics are presented with a tracheostomy cannula for the identified patient.

Contraindications

Suctioning
N/A

Emergency tracheostomy reinsertion
Inability to landmark or visualize

Treatment

Consider Suctioning			
	Age < 1 year	**Age** ≥ 1 year to < 12 years	**Age** ≥ 12 years
Dose	suction at 60-100 mmHg	suction at 100-120 mmHg	suction at 100-150 mmHg
Max. single dose	10 seconds	10 seconds	10 seconds
Dosing interval	1 minute	1 minute	1 minute
Max. # of doses	N/A	N/A	N/A

Consider emergency tracheostomy reinsertion	
Maximum number of attempts	2

Clinical Considerations

Suctioning:
Pre-oxygenate with 100% oxygen.
In an alert patient, whenever possible, have patient cough to clear airway prior to suctioning.

Emergency tracheostomy reinsertion:
A reinsertion attempt is defined as the insertion of the cannula into the tracheostomy.
A new replacement inner or outer cannula is preferred over cleaning and reusing an existing one.
Utilize a family member or caregiver who is available and knowledgeable to replace the tracheostomy cannula.

Medical Cardiac Arrest Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Non-traumatic cardiac arrest.

Primary Clinical Consideration(s):

In the following settings, consider very early transport after a minimum of one analysis (and defibrillation if indicated) once an egress plan is organized:

1. pregnancy presumed to be ≥ 20 weeks gestation (fundus above umbilicus, ensure manual displacement of uterus to left);
2. hypothermia;
3. airway obstruction;
4. non-opioid drug overdose/toxicology, or;
5. other known reversible cause of arrest not addressed.

For patients in refractory VF or pulseless VT, transport of the patient should begin after the third consecutive shock. Refractory VF or pulseless VT is defined for the purpose of this directive, as persistent VF or pulseless VT after 3 consecutive shocks.

Conditions

CPR	
Age	N/A
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Performed in 2-minute intervals

Manual Defibrillation	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT

AED or SAED Defibrillation	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Defibrillation indicated If not using manual defibrillation

EPINEPHrine	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Anaphylaxis suspected as causative event

Medical TOR	
Age	≥ 16 years
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Arrest not witnessed by paramedic **AND** No ROSC after 20 minutes of resuscitation **AND** No defibrillation delivered

Contraindications

CPR
Obviously dead as per BLS PCS
Meet conditions of the BLS PCS *Do Not Resuscitate (DNR) Standard*

AED or SAED Defibrillation
Non-shockable rhythm

Medical TOR
Known reversible cause of the arrest unable to be addressed
Pregnancy presumed to be ≥ 20 weeks gestation
Suspected hypothermia
Airway obstruction
Non-opioid drug overdose/toxicology

Manual Defibrillation
Rhythms other than VF or pulseless VT

EPINEPHrine
Allergy or sensitivity to EPINEPHrine

Treatment

Consider CPR as per current Heart and Stroke Foundation of Canada Guidelines

Consider Manual defibrillation (if available and authorized)

	Age ≥ 24 hours to < 8 years	**Age** ≥ 8 years
Dose	1 defibrillation	1 defibrillation
Initial dose	2 J/kg	As per RBHP / manufacturer
Subsequent dose(s)	4 J/kg	As per RBHP / manufacturer
Dosing interval	2 min	2 min
Max. # of doses	N/A	N/A

Consider AED or SAED defibrillation (if not using manual defibrillation)

	Age ≥ 24 hours to < 8 years	**Age** ≥ 8 years
Dose	1 defibrillation with or without pediatric attenuator cable	1 defibrillation
Max. single dose	As per RBHP / manufacturer	As per RBHP / manufacturer
Dosing interval	2 min	2 min
Max. # of doses	N/A	N/A

Consider EPINEPHrine (only if anaphylaxis is suspected as causative event)	
	Route
	IM
	Concentration
	1 mg/mL = 1:1,000
Dose	0.01 mg/kg*
Max. single dose	0.5 mg
Dosing interval	N/A
Max. # of doses	1

***The EPINEPHrine dose may be rounded to the nearest 0.05 mg**

Mandatory Provincial Patch Point

Patch to consider Medical TOR (if applicable).

If the patch fails or if Medical TOR does not apply, transport to the closest appropriate hospital following ROSC or 20 minutes of resuscitation without ROSC.

Patch early (e.g. following the 4th analysis) to consider TOR if there are extenuating circumstances; surrounding egress, prolonged transport or significant clinical limitations where the paramedic considers ongoing resuscitation to be futile.

Clinical Considerations

Consider regional base hospital advanced airway strategy (e.g. SGA medical directive) where more than OPA/NPA and BVM is required.

There is no clear role for routine administration of naloxone in confirmed cardiac arrest.

The BHP might **not** authorize TOR even though the patient meets TOR rule. Factors may include: location of the patients, $EtCO_2$, age, bystander witnessed, bystander CPR, transportation time, and unusual cause of cardiac arrest such as electrocution, hanging, and toxicology.

The BHP may authorize TOR even though the patient does **not** meet the TOR rule. Factors that may be taken into account include extenuating egress limitations, prolonged transport, caregiver wishes, existence of DNR confirmation form, and underlying end stage progressive illness.

Defibrillation Joule Settings

This section is intentionally left blank.

Trauma Cardiac Arrest Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Cardiac arrest secondary to severe blunt or penetrating trauma.

Conditions

CPR	
Age	N/A
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Performed in 2 minute intervals

Manual defibrillation	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT

AED or SAED defibrillation	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Defibrillation indicated

Trauma TOR	
Age	≥ 16 years
LOA	Altered
HR	0
RR	0
SBP	N/A
Other	No palpable pulses **AND** No defibrillation delivered **AND** Rhythm Asystole **AND** No signs of life at any time since fully extricated **OR** Signs of life when fully extricated with the closest ED ≥30 min transport time away **OR** Rhythm PEA with the closest ED ≥30 min transport time away.

Contraindications

CPR
Obviously dead as per BLS PCS
Meet conditions of the BLS PCS *Do Not Resuscitate (DNR) Standard*

AED or SAED Defibrillation
Non-shockable rhythm

Manual Defibrillation
Rhythms other than VF or pulseless VT

Trauma TOR
Age <16 years
Defibrillation delivered
Signs of life at any time since fully extricated.
Rhythm PEA and closest ED <30 min transport time away
Patients with penetrating trauma to the torso or head/neck and Lead Trauma Hospital < 30 min transport time away

Treatment

Consider CPR as per current Heart and Stroke Foundation of Canada Guidelines

Consider manual defibrillation (if available and authorized)

	Age ≥ 24 hours to < 8 years	Age ≥ 8 years
Dose	1 defibrillation	1 defibrillation
Initial dose	2 J/kg	As per RBHP / manufacturer
Dosing interval	N/A	N/A
Max. # of doses	1	1

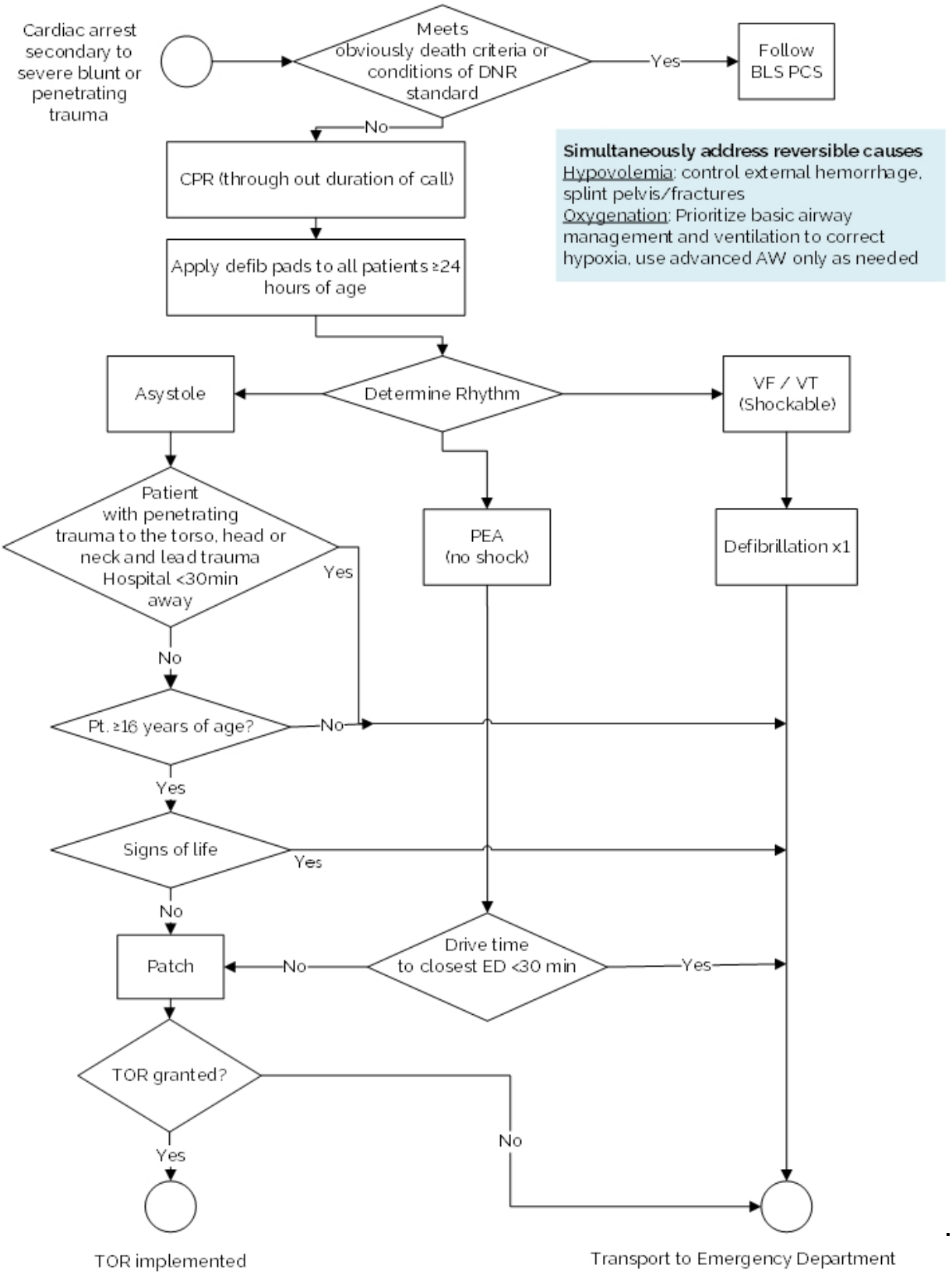
Consider AED or SAED defibrillation (if not using manual defibrillation)

	Age ≥ 24 hours to < 8 years	Age ≥ 8 years
Dose	1 defibrillation With or without Pediatric Attenuator Cable	1 defibrillation
Max. single dose	As per RBHP / manufacturer	As per RBHP / manufacturer
Dosing interval	N/A	N/A
Max. # of doses	1	1

Mandatory Provincial Patch Point

Patch to BHP for authorization to apply the Trauma TOR if applicable. If the BHP patch fails, or the Trauma TOR does not apply, transport to the closest appropriate receiving facility following the 1st analysis/defibrillation.

Treatment – Algorithm For Trauma Arrest



Clinical Considerations

If no obvious external signs of significant blunt trauma, consider medical cardiac arrest and treat according to the appropriate medical cardiac arrest directive.

Signs of life: specifically any spontaneous movement, respiratory efforts, organized electrical activity on ECG, and reactive pupils.

An intravenous fluid bolus may be considered, where it does not delay transport and should not be prioritized over management of other reversible pathology.

Newborn Resuscitation Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Newborn patient.

Conditions

Positive Pressure Ventilation (PPV)	
Age	< 24 hours
LOA	N/A
HR	< 100 bpm
RR	N/A
SBP	N/A
Other	N/A

CPR	
Age	< 24 hours
LOA	N/A
HR	< 60 bpm
RR	N/A
SBP	N/A
Other	After 30 seconds of PPV using room air

Contraindications

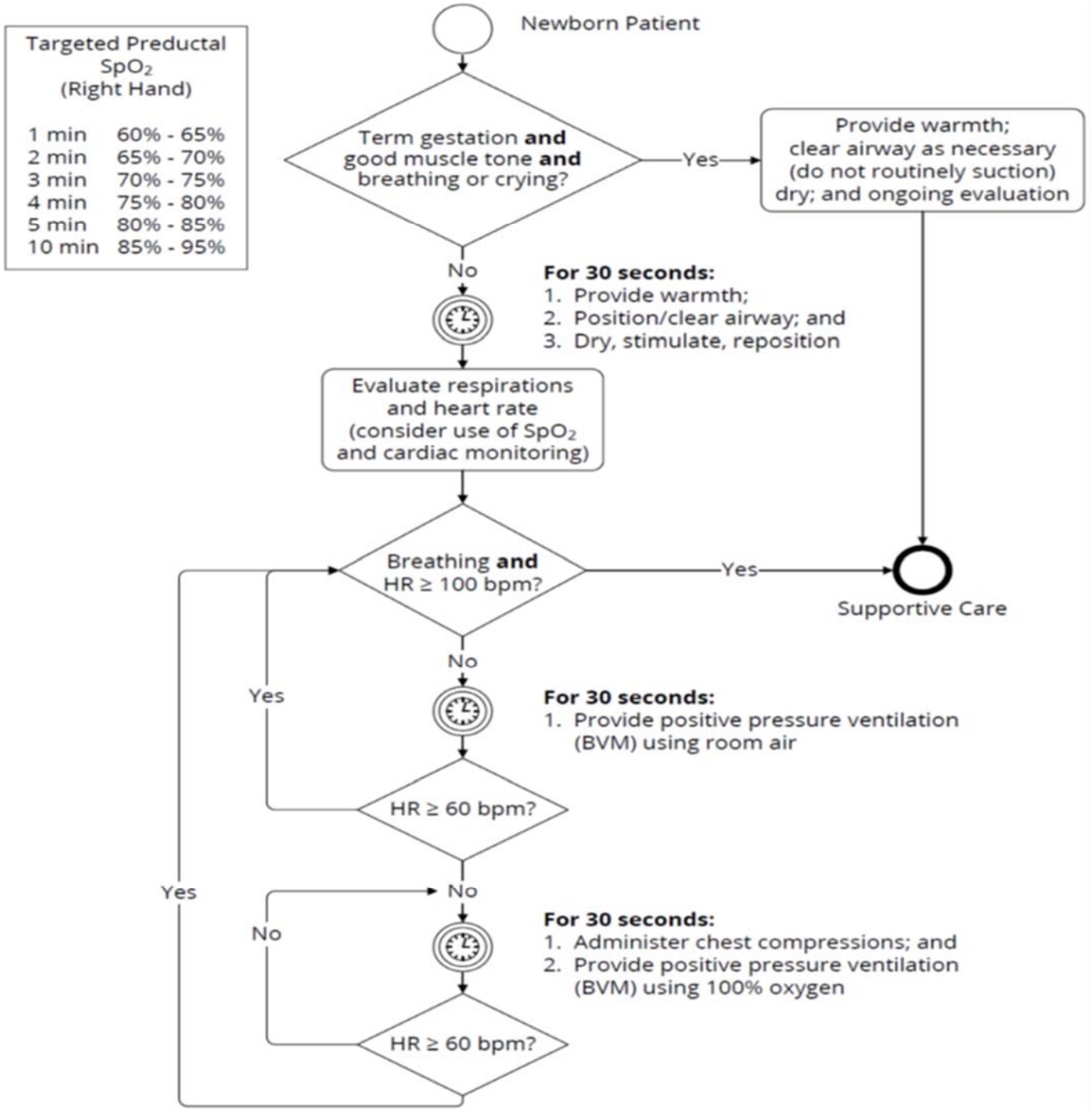
Positive Pressure Ventilation (PPV)
Obviously dead as per BLS PCS
Presumed gestational age less than 20 weeks

CPR
Obviously dead as per BLS PCS
Presumed gestational age less than 20 weeks

Treatment

Consider PPV as per the treatment flowchart

Consider CPR as per current Heart and Stroke Foundation of Canada Guidelines



Clinical Considerations

If newborn resuscitation is required, initiate cardiac monitoring and right-hand pulse oximetry monitoring.

Infants born between 20-25 weeks gestation may be stillborn or die quickly. Initiate resuscitation and transport as soon as feasible.

If gestational age cannot be confirmed, initiate resuscitation and rapid transport.

If newborn is less than 20 weeks gestation, resuscitation is futile. Provide the newborn with warmth and consider patching to BHP for further direction.

Return of Spontaneous Circulation (ROSC) Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Patient with return of spontaneous circulation (ROSC) after the resuscitation was initiated.

Conditions

0.9% NaCl Fluid Bolus	
Age	≥ 2 years
LOA	N/A
HR	N/A
RR	N/A
SBP	Hypotension
Other	Chest auscultation is clear

Contraindications

0.9% NaCl Fluid Bolus
Fluid overload

Treatment

Consider optimizing ventilation and oxygenation
Titrate oxygenation 94-98%
Avoid hyperventilation and target $ETCO_2$ to 30-40 mmHg with continuous waveform capnography (if available)

Consider 0.9% NaCl fluid bolus (if available and authorized)		
	Age ≥ 2 years to < 12 years	**Age** ≥ 12 years
	Route IV	**Route** IV
Infusion	10 ml/kg	10 ml/kg
Infusion interval	Immediate	Immediate
Reassess every	100 ml	250 ml
Max. volume	1,000 ml	1,000 ml

Consider 12-lead ECG acquisition and interpretation

Clinical Considerations

Consider initiating transport in parallel with the above treatment.

IV fluid bolus applies only to PCPs authorized for PCP Autonomous IV.

Cardiac Ischemia Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Suspected cardiac ischemia.

Conditions

ASA	
Age	≥ 18 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	Able to chew and swallow

nitroglycerin	
Age	≥ 18 years
LOA	Unaltered
HR	60-159 bpm
RR	N/A
SBP	Normotension
Other	Prior history of nitroglycerin use **OR** IV access obtained

Contraindications

	nitroglycerin
	Allergy or sensitivity to nitrates
	Phosphodiesterase inhibitor use within the previous 48 hours
	SBP drops by one-third or more of its initial value after nitroglycerin is administered
	12-lead ECG compatible with Right Ventricular MI

Treatment

Consider ASA	
	Route
	PO
Dose	160-162 mg
Max. single dose	162 mg
Dosing interval	N/A
Max. # of doses	1

Consider 12-lead ECG acquisition and interpretation for STEMI

Consider nitroglycerin		
	STEMI	
	No	Yes
	SBP ≥ 100 mmHg	**SBP** ≥ 100 mmHg
	Route SL	**Route** SL
Dose	0.3 mg **OR** 0.4 mg	0.3 mg **OR** 0.4 mg
Max. single dose	0.4 mg	0.4 mg
Dosing interval	5 min	5 min
Max. # of doses	6	3

Clinical Considerations

Suspect a Right Ventricular MI in all inferior STEMIs and perform at minimum V4R to confirm (ST-elevation ≥ 1mm in V4R).

Do not administer nitroglycerin to a patient with Right Ventricular STEMI.

IV condition applies only to PCPs authorized for PCP Autonomous IV.

Apply defibrillation pads when a STEMI is identified.

The goal for time to 12-lead ECG from first medical contact is < 10 minutes where possible.

Acute Cardiogenic Pulmonary Edema Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Moderate to severe respiratory distress;

AND

Suspected acute cardiogenic pulmonary edema.

Conditions

	nitroglycerin
Age	≥ 18 years
LOA	N/A
HR	60-159 bpm
RR	N/A
SBP	Normotension
Other	N/A

Contraindications

nitroglycerin
Allergy or sensitivity to nitrates
Phosphodiesterase inhibitor use within the previous 48 hours
SBP drops by one-third or more of its initial value after nitroglycerin is administered

Treatment

Consider nitroglycerin			
	SBP ≥ 100 mmHg to < 140 mmHg	**SBP** ≥ 140 mmHg	
	IV or Hx* Yes	**IV or Hx*** No	**IV or Hx*** Yes
	Route SL	**Route** SL	**Route** SL
Dose	0.3 mg **or** 0.4 mg	0.3 mg **or** 0.4 mg	0.6 mg **or** 0.8 mg
Max. single dose	0.4 mg	0.4 mg	0.8 mg
Dosing interval	5 min	5 min	5 min
Max. # of doses	6	6	6

***Hx refers to a patient with a prior history of nitroglycerin use**

Consider 12-lead ECG acquisition and interpretation

Clinical Considerations

IV condition applies only to PCPs authorized for PCP Autonomous IV.

Hypoglycemia Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Suspected hypoglycemia

Conditions

dextrose	
Age	≥ 2 years
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Hypoglycemia

glucagon	
Age	N/A (≥4 years for IN powder)
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Hypoglycemia

Contraindications

dextrose
Allergy or sensitivity to dextrose

glucagon
Allergy or sensitivity to glucagon
Pheochromocytoma

Treatment

Consider glucometry

Consider dextrose (if available and authorized)

	Age	
	≥2 years	
	Concentration	**Concentration**
	10% dextrose	50% dextrose
	Route	**Route**
	IV	IV
Dose	0.2 g/kg (2 ml/kg)	0.5 g/kg (1 ml/kg)
Max. single dose	25 g (250 ml)	25 g (50 ml)
Dosing interval	10 min	10 min
Max. # of doses	2	2

Titrate dextrose to a level of awareness where the patient can safely consume complex carbohydrate.

Consider glucagon (if not using dextrose)			intranasal powder (If authorized and available)
	Age N/A		**Age** ≥4 years
	Weight < 25 kg	**Weight** ≥ 25 kg	**Weight** N/A
	Route IM	**Route** IM	**Route** IN
Dose	0.5 mg	1 mg	3 mg
Max. single dose	0.5 mg	1 mg	3 mg
Dosing interval	20 min	20 min	20 min
Max. # of doses	2	2	2

Clinical Considerations

If the patient responds to dextrose or glucagon, he/she may receive oral glucose or other simple carbohydrates.

If only mild signs or symptoms are exhibited, the patient may receive oral glucose or other simple carbohydrates instead of dextrose or glucagon.

If a patient initiates an informed refusal of transport, a final set of vital signs including blood glucometry must be attempted and documented.

IV administration of dextrose applies only to PCPs authorized for PCP Autonomous IV.

Intranasal glucagon is a powder that is supplied in a commercially available single-dose intranasal device.

Considerations for Treat and Discharge (if authorized)

All of the following criteria must be met:

- ☐ the patient is ≥18 AND <65 years old;
- ☐ the patient has a diagnosis of diabetes;
- ☐ the hypoglycemia can be explained by insulin administration with inadequate oral intake;
- ☐ the hypoglycemia promptly responded to a single administration of dextrose or glucagon as per the Medical Directive and/or consumed oral glucose or other complex carbohydrates;
- ☐ this was a single isolated episode of symptomatic hypoglycemia within the past 24 hours;
- ☐ the blood glucose is ≥4.0mmol/L after treatment;
- ☐ the patient has a return to their normal level of consciousness and is asymptomatic;
- ☐ a complete set of vital signs are within expected normal ranges;

AND

- ☐ not an intentional overdose;
- ☐ the hypoglycemia must not be related to alcohol or substance abuse or withdrawal;
- ☐ no seizure or reported history of seizure prior to paramedic treatment,
- ☐ not on an oral hypoglycemic medication;
- ☐ hypoglycemia is not considered to be related to an acute medical illness, and;
- ☐ the patient is not pregnant.

In addition to the above criteria, if all of the following requirements have been met, the patient can be discharged by paramedics:

- ☐ the patient has access to appropriate carbohydrates;
- ☐ a responsible adult agrees to remain with the patient for the next 4 hours;
- ☐ all of the patient or substitute decision makers questions were answered and a care plan was developed;
- ☐ the patient or substitute decision maker has been advised to follow up with their primary health care team or provider;

- clear instructions to call 911 were provided should symptoms redevelop;
- patient or substitute decision maker has the ability to access 911 should symptoms redevelop, and;
- patient or substitute decision maker consents to the discharge.

Clinical Considerations (Treat and Discharge)

Patch to BHP for consultation if you are unclear if the patient meets all of the discharge criteria.

Opioid Toxicity and Withdrawal Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Suspected opioid toxicity.

Conditions

naloxone	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	< 10 breaths/min
SBP	N/A
Other	Inability to adequately ventilate **OR** persistent need to assist ventilations

buprenorphine/naloxone	
Age	≥ 16
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	Received naloxone for current opioid toxicity episode **AND** Patient is exhibiting acute withdrawal with a COWS* score ≥ 8

Contraindications

naloxone
Allergy or sensitivity to naloxone

buprenorphine/naloxone
Allergy or sensitivity to buprenorphine
Taken methadone in the past 72 hours

Treatment

Consider naloxone	Route	Route	Route	Route
	IV	IM	IN	SC
Dose	Up to 0.4 mg**	0.4 mg	2-4 mg	0.8 mg
Max. single dose	0.4 mg	0.4 mg	2-4 mg	0.8 mg
Dosing interval	5 min	5 min	5 min	5 min
Max. # of doses	3	3	3	3

**For the IV route, titrate naloxone only to restore the patient's respiratory status.

Consider buprenorphine/naloxone (if available and authorized)	Route
	BUC/SL
Initial dose	16 mg
Subsequent dose(s)	8 mg
Dosing interval	10 minutes
Max. cumulative dose	24 mg

Clinical Considerations

IV administration of naloxone applies only to PCPs authorized for PCP Autonomous IV.

Upfront aggressive management of the airway is paramount and the initial priority.

If no response to initial treatment; consider patching for further doses.

If the patient does not respond to airway management and the administration of naloxone, glucometry should be considered.

Combative behaviour should be anticipated following naloxone administration and paramedics should protect themselves accordingly, thus the importance of gradual titrating (if given IV) to desired clinical effect: respiratory rate ≥10, adequate airway and ventilation, not full alertness.

Clinical Opiate Withdrawal Scale (COWS)

< 5 – No active withdrawal	13-24 – Moderate withdrawal	> 36 – Severe withdrawal
5-12 – Mild withdrawal	25-36 – Moderately severe withdrawal	

A score of **≥ 8** is an indication for buprenorphine/naloxone administration

Resting Pulse Rate _____ beats/minute *Measured after patient is sitting or lying for one minute* 0 pulse rate 80 or below 1 pulse rate 81–100 2 pulse rate 101–120 4 pulse rate greater than 120	**GI Upset** *over last ½ hour* 0 no GI symptoms 1 stomach cramps 2 nausea or loose stool 3 vomiting or diarrhea 5 multiple episodes of diarrhea or vomiting
Sweating *over past ½ hour not accounted for by room temperature or patient activity* 0 no report of chills or flushing 1 subjective report of chills or flushing 2 flushed or observable moistness on face 3 beads of sweat on brow or face 4 sweat streaming off face	**Tremor** *observation of outstretched hands* 0 no tremor 1 tremor can be felt, but not observed 2 slight tremor observable 4 gross tremor or muscle twitching
Restlessness *observation during assessment* 0 able to sit still 1 reports difficulty sitting still, but is able to do so 3 frequent shifting or extraneous movements of legs/arms 5 unable to sit still for more than a few seconds	**Yawning** *observation during assessment* 0 no yawning 1 yawning once or twice during assessment 2 yawning three or more times during assessment 4 yawning several times/minute
Pupil Size 0 pupils pinned or normal size for room light 1 pupils possibly larger than normal for room light 2 pupils moderately dilated 5 pupils so dilated that only the rim of the iris is visible	**Anxiety or Irritability** 0 none 1 patient reports increasing irritability or anxiousness 2 patient obviously irritable anxious 4 patient so irritable or anxious that participation in the assessment is difficult
Bone or Joint Aches *If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored* 0 not present 1 mild diffuse discomfort 2 patient reports severe diffuse aching of joints/muscles 4 patient is rubbing joints or muscles and is unable to sit still because of discomfort	**Gooseflesh Skin** 0 skin is smooth 3 piloerrection of skin can be felt or hairs standing up on arms 5 prominent piloerrection
Runny Nose or Tearing *Not accounted for by cold symptoms or allergies* 0 not present 1 nasal stuffiness or unusually moist eyes 2 nose running or tearing 4 nose constantly running or tears streaming down cheeks	**Total Score** _____ *The total score is the sum of all 11 items.* Initials of person completing assessment: _____

Suspected Adrenal Crisis Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

A patient with primary adrenal failure who is experiencing clinical signs of an adrenal crisis.

Conditions

	hydrocortisone
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Paramedics are presented with a vial of hydrocortisone for the identified patient **AND** Age-related hypoglycemia **OR** GI symptoms (vomiting, diarrhea, abdominal pain) **OR** Syncope **OR** Temperature ≥38C or suspected/history of fever **OR** Altered level of awareness **OR** Age-related tachycardia **OR** Age-related hypotension

Contraindications

hydrocortisone
Allergy or sensitivity to hydrocortisone

Treatment

Consider hydrocortisone	
	Route
	IM/IV
Dose	2 mg/kg*
Max. single dose	100 mg
Dosing interval	N/A
Max. # of doses	1

***Dose should be rounded to the nearest 10 mg**

Clinical Considerations

IV administration of hydrocortisone applies only to PCP's authorized for PCP Autonomous IV.

Analgesia Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Pain

Conditions

acetaminophen	
Age	≥ 12 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

ibuprofen	
Age	≥ 12 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

ketorolac	
Age	≥ 12 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	Normotension
Other	N/A

Contraindications

acetaminophen
Acetaminophen use within previous 4 hours
Allergy or sensitivity to acetaminophen
Hx of liver disease
Active vomiting
Unable to tolerate oral medication
Suspected ischemic chest pain

ibuprofen
NSAID use within previous 6 hours
Allergy or sensitivity to ASA or NSAIDs
Patient on anticoagulation therapy
Current active bleeding
Hx of peptic ulcer disease or GI bleed
Pregnant
If asthmatic, no prior use of ASA or other NSAIDs
CVA or TBI in the previous 24 hours
Known renal impairment
Active vomiting
Unable to tolerate oral medication
Suspected ischemic chest pain

ketorolac
NSAID use within previous 6 hours
Allergy or sensitivity to ASA or NSAIDs
Patient on anticoagulation therapy
Current active bleeding
Hx of peptic ulcer disease or GI bleed
Pregnant
If asthmatic, no prior use of ASA or other NSAIDs
CVA or TBI in the previous 24 hours
Known renal impairment
Suspected ischemic chest pain

Treatment

Consider acetaminophen		
	Age ≥ 12 years to < 18 years	**Age** ≥ 18 years
Route	PO	PO
Dose	500-650 mg	960-1,000 mg
Max. single dose	650 mg	1,000 mg
Dosing interval	N/A	N/A
Max. # of doses	1	1

Consider ibuprofen	
	Age
	≥ 12 years
Route	PO
Dose	400 mg
Max. single dose	400 mg
Dosing interval	N/A
Max. # of doses	1

Consider ketorolac	
	Age
	≥ 12 years
Route	IM/IV
Dose	10-15 mg
Max. single dose	15 mg
Dosing interval	N/A
Max. # of doses	1

Clinical Considerations

Whenever possible, consider co-administration of acetaminophen and ibuprofen.

Suspected renal colic patients should routinely be considered for NSAIDs, either ibuprofen or ketorolac.

IV administration of ketorolac applies only to PCPs authorized for PCP Autonomous IV.

Nausea/Vomiting Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Nausea **OR** vomiting.

Conditions

ondansetron	
Age	N/A
Weight	≥ 25 kg
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

dimenhyDRINATE	
Age	< 65 years
Weight	≥ 25 kg
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

ondansetron
Allergy to ondansetron
Prolonged QT syndrome (known to patient)
Apomorphine use

dimenhyDRINATE
Allergy or sensitivity to dimenhyDRINATE or other antihistamines
Overdose on antihistamines or anticholinergics or tricyclic antidepressants
Co-administration of diphenhydrAMINE

Treatment

Consider ondansetron	
	Weight ≥ 25 kg
	Route PO
Dose	4 mg
Max. single dose	4 mg
Dosing interval	N/A
Max. # of doses	1

Consider dimenhyDRINATE		
	Weight ≥25 kg to < 50 kg	**Weight** ≥ 50 kg
	Route IV/IM	**Route** IV/IM
Dose	25 mg	50 mg
Max. single dose	25 mg	50 mg
Dosing interval	N/A	N/A
Max. # of doses	1	1

Clinical Considerations

IV administration of dimenhyDRINATE applies only to PCPs authorized for PCP Autonomous IV

Prior to IV administration, dilute dimenhyDRINATE (concentration of 50 mg/1 ml) 1:9 with Normal Saline or D5W. If administered IM do not dilute

If a patient has received Ondansetron and has no relief of their nausea & vomiting symptoms after 30 minutes, dimenhyDRINATE may be considered (or vise versa).

dimenhyDRINATE can be used in patients ≥ 65 if ondansetron is not available.

Home Dialysis Emergency Disconnect Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Patient receiving home dialysis (hemo or peritoneal) and connected to dialysis machine and requires transport to the closest appropriate receiving facility;

AND

Patient is unable to disconnect;

AND

There is no family member or caregiver who is available and knowledgeable in dialysis disconnect.

Conditions

Home Dialysis Emergency Disconnect	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

Home Dialysis Emergency Disconnect
N/A

Treatment

Consider Home Dialysis Emergency Disconnect

Clinical Considerations

Generally, emergency disconnect kit with materials and instructions can be found hanging from dialysis machine or nearby on the wall.

Ensure both the patient side and machine side of the connection are clamped before disconnecting and attaching end caps.

Emergency Childbirth Medical Directive

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Pregnant patient experiencing labour; **OR**

Post-partum patient immediately following delivery and/or placenta.

Conditions

Delivery	
Age	Childbearing years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Second stage labour **AND/OR** Imminent birth **AND/OR** Shoulder Dystocia **AND/OR** Breech Delivery **AND/OR** Prolapsed Cord

Umbilical cord management	
Age	Childbearing years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Cord complications **OR** if neonatal or maternal resuscitation is required **OR** Due to transport considerations

External Uterine Massage	
Age	Childbearing years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Post-placental delivery

oxytocin	
Age	Childbearing years
LOA	N/A
HR	N/A
RR	N/A
SBP	< 160 mmHg
Other	Postpartum delivery **AND/OR** Placental delivery

Contraindications

Delivery
N/A

Umbilical cord management
N/A

External Uterine Massage
Placenta not delivered

oxytocin
Allergy or sensitivity to oxytocin
Undelivered fetus
Suspected or known pre-eclampsia with current pregnancy
Eclampsia (seizures) with current pregnancy
≥4 hours post placenta delivery

Treatment

Consider delivery

Position the patient and deliver neonate.

Consider shoulder dystocia delivery

Perform ALARM twice on scene. If successful; deliver neonate. If unsuccessful; transport to closest appropriate facility.

Consider breech delivery

HANDS OFF the breech. Allow neonate to deliver to umbilicus; consider carefully releasing the legs & arms as they are delivered; otherwise hands off.

Once hairline is visible **AND/OR** 3 mins has passed since umbilicus was visualized attempt the Mauriceau Smellie-Veit maneuver.

If successful; deliver neonate. If unsuccessful; transport to closest appropriate facility.

Consider prolapsed cord delivery

If a cord prolapse is present, the fetal part should be elevated to relieve pressure on the cord. Assist the patient into a knee-chest position or exaggerated Sims position, and insert gloved fingers/hand into the vagina to apply manual digital pressure to the presenting part which is maintained until transfer of care in hospital.

Consider umbilical cord management

If a nuchal cord is present and loose, slip cord over the neonate's head. Only if a nuchal cord is tight and cannot be slipped over the neonate's head, clamp and cut the cord, encourage rapid delivery.

Following delivery of the neonate, the cord should be clamped and cut immediately if neonatal or maternal resuscitation is required. Otherwise, after pulsations have ceased (approximately 2-3 minutes), clamp the cord in two places and cut the cord.

Consider external uterine massage

Post placental delivery

Consider oxytocin

	Route
	IM
Dose	10 units
Max. single dose	10 units
Dosing Interval	N/A
Max. # of doses	1

Clinical Considerations

If the patient presents with limb-presentation, do not attempt to push the limb back into the vagina; discourage the patient from pushing, cover the limb using a dry sheet to maintain warmth, and initiate transport as per the *Load and Go Patient Standard* of the BLS PCS.

If labour is failing to progress, discourage the patient from pushing or bearing down during contractions.

If delivery has not occurred at scene within approximately ten minutes of initial assessment, consider transport in conjunction with the following:

a. Patient assessment findings:
    i. Lack of progression of labour;
    ii. Multiple births expected;
    iii. Neonate presents face-up;
    iv. Pre-eclampsia;
    v. Presence of vaginal hemorrhage;
    vi. Premature labour;
    vii. Primip;
b. Distance to the closest appropriate receiving facility.

When the placenta is delivered, inspect it for wholeness, place in a plastic bag from the OBS kit, label it with the maternal patient's name and time of delivery, and transport it with the maternal or neonatal patient. Delivery of the placenta should not delay transport considerations/initiation.

Section 2 – ACP Core Medical Directives

2

Orotracheal Intubation Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Need for ventilatory assistance or airway control;

AND

Other airway management is ineffective.

Conditions

lidocaine spray	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Orotracheal Intubation

Orotracheal Intubation	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

lidocaine spray
Allergy or sensitivity to lidocaine
Unresponsive patient

Orotracheal Intubation
Age < 50 years **AND** current episode of asthma exacerbation **AND** not in or near cardiac arrest.

Treatment

Consider topical lidocaine spray (to the hypopharynx) for orotracheal intubation when GCS is ≥ 4	
	Route
	TOP
Dose	10 mg/spray
Max. dose	5 mg/kg
Dosing interval	N/A
Max. # of doses	20

Consider orotracheal intubation
With or without intubation facilitation devices. The maximum number of intubation attempts is 2.

Confirm orotracheal tube placement	
Method	**Method**
Primary	*Secondary*
$ETCO_2$ (Waveform capnography)	$ETCO_2$ (Non-waveform device)
	Visualization
	Auscultation
	Chest rise
	Esophageal detection device

Clinical Considerations

An intubation attempt is defined as insertion of the laryngoscope blade into the mouth for the purposes of intubation.

Confirmation of orotracheal intubation must use $ETCO_2$ (Waveform capnography). If waveform capnography is not available or not working then at least 3 secondary methods must be used. Additional secondary ETT placement confirmation devices may be authorized by the local medical director.

ETT placement must be reconfirmed immediately after every patient movement.

Supraglottic Airway Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Need for ventilatory assistance or airway control;

AND

Other airway management is ineffective.

Conditions

	Supraglottic Airway
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Absent gag reflex

Contraindications

Supraglottic Airway
Airway obstructed by a foreign object
Known esophageal disease (varices)
Trauma to the oropharynx
Caustic ingestion

Treatment

Consider supraglottic airway insertion
The maximum number of supraglottic airway insertion attempts is 2.

Confirm supraglottic airway placement	
Method	**Method**
Primary	*Secondary*
$ETCO_2$ (Waveform capnography)	$ETCO_2$ (Non-waveform device)
	Auscultation
	Chest rise

Clinical Considerations

An attempt at supraglottic airway insertion is defined as the insertion of the supraglottic airway into the mouth.

Confirmation of supraglottic airway must use $ETCO_2$ (Waveform capnography). If waveform capnography is not available or is not working, then at least 2 secondary methods must be used.

Bronchoconstriction Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Respiratory distress;

AND

Suspected bronchoconstriction.

Conditions

salbutamol	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

EPINEPHrine	
Age	N/A
Weight	N/A
LOA	N/A
HR	N/A
RR	BVM ventilation required
SBP	N/A
Other	Hx of asthma

	dexamethasone
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Hx of asthma **OR** COPD **OR** 20 pack-year history of smoking

Contraindications

salbutamol
Allergy or sensitivity to salbutamol

EPINEPHrine
Allergy or sensitivity to EPINEPHrine

dexamethasone
Allergy or sensitivity to steroids
Currently on PO or parenteral steroids

Treatment

Consider salbutamol	Weight < 25 kg		Weight ≥ 25 kg	
	Route MDI*	**Route** NEB	**Route** MDI*	**Route** NEB
Dose	Up to 600 mcg (6 puffs)	2.5 mg	Up to 800 mcg (8 puffs)	5 mg
Max. single dose	600 mcg	2.5 mg	800 mcg	5 mg
Dosing interval	5-15 min PRN	5-15 min PRN	5-15 min PRN	5-15 min PRN
Max. # of doses	3	3	3	3

***1 puff=100 mcg**

Consider EPINEPHrine	Route IM
	Concentration 1 mg/mL = 1:1,000
Dose	0.01 mg/kg*
Max. single dose	0.5 mg
Dosing interval	N/A
Max. # of doses	1

***The EPINEPHrine dose may be rounded to the nearest 0.05 mg**

Consider dexamethasone	Route PO/IM/IV
Dose	0.5 mg/kg
Max. single dose	8 mg
Dosing interval	N/A
Max. # of doses	1

Clinical Considerations

EPINEPHrine should be the 1st medication administered if the patient is apneic. Salbutamol MDI may be administered subsequently using a BVM MDI adapter.

Nebulization is contraindicated in patients with a known or suspected fever or in the setting of a declared febrile respiratory illness outbreak by the local medical officer of health.

When administering salbutamol MDI, the rate of administration should be 100 mcg approximately every 4 breaths.

A spacer should be used when administering salbutamol MDI.

Moderate to Severe Allergic Reaction Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Exposure to a probable allergen;

AND

Signs and/or symptoms of a moderate to severe allergic reaction (including anaphylaxis).

Conditions

EPINEPHrine	
Age	N/A
Weight	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	For anaphylaxis only

diphenhydrAMINE	
Age	N/A
Weight	≥ 25 kg
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

EPINEPHrine
Allergy or sensitivity to EPINEPHrine

diphenhydrAMINE
Allergy or sensitivity to diphenhydramine

Treatment

Consider EPINEPHrine	
	Route
	IM
	Concentration
	1 mg/mL = 1:1,000
Dose	0.01 mg/kg*
Max. single dose	0.5 mg
Dosing interval	Minimum 5 min
Max. # of doses	2

***The EPINEPHrine dose may be rounded to the nearest 0.05 mg**

Consider diphenhydrAMINE		
	Weight	**Weight**
	≥ 25 kg to < 50 kg	≥ 50 kg
	Route	**Route**
	IV/IM	IV/IM
Dose	25 mg	50 mg
Max. single dose	25 mg	50 mg
Dosing interval	N/A	N/A
Max. # of doses	1	1

Clinical Considerations

EPINEPHrine administration takes priority over IV access.

Croup Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Current history of URTI;

AND

Barking cough or recent history of a barking cough.

Conditions

EPINEPHrine	
Age	≥ 6 months to < 8 years
LOA	N/A
HR	<200 bpm
RR	N/A
SBP	N/A
Other	Stridor at rest

dexamethasone	
Age	≥ 6 months to < 8 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	For mild, moderate and severe croup

Contraindications

EPINEPHrine
Allergy or sensitivity to EPINEPHrine

dexamethasone
Allergy or sensitivity to steroids
Steroids received within the last 48 hours
Unable to tolerate oral medications

Treatment

Consider EPINEPHrine		
	Weight < 10 kg	**Weight** ≥ 10 kg
	Route NEB	**Route** NEB
	Concentration 1 mg/mL = 1:1,000	**Concentration** 1 mg/mL = 1:1,000
Dose	2.5 mg	5 mg
Max. single dose	2.5 mg	5 mg
Dosing interval	N/A	N/A
Max. # of doses	1	1

Consider dexamethasone	
	Age ≥ 6 months to < 8 years
	Route PO
Dose	0.5 mg/kg
Max. single dose	8 mg
Dosing interval	N/A
Max. # of doses	1

Clinical Considerations

N/A

Tension Pneumothorax Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Pre-arrest or VSA;

AND

Absent or severely diminished breath sounds on the affected side(s).

Conditions

Needle Thoracostomy	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	Hypotension or VSA
Other	N/A

Contraindications

Needle Thoracostomy
N/A

Treatment

Consider needle thoracostomy

Clinical Considerations

Needle thoracostomy may be performed at the 4th intercostal space anterior axillary line (preferred location) **OR** the 2nd intercostal space in the midclavicular line.

Endotracheal and Tracheostomy Suctioning & Reinsertion Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Patient with endotracheal or tracheostomy tube

AND

Airway obstruction or increased secretions.

Conditions

Suctioning	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Emergency tracheostomy reinsertion	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Patient with an existing tracheostomy where the inner and/or outer cannula(s) have been removed from the airway **AND** Respiratory distress **AND** Inability to adequately ventilate **AND** Paramedics are presented with a tracheostomy cannula for the identified patient.

Contraindications

Suctioning	Emergency tracheostomy reinsertion
N/A	Inability to landmark or visualize

Treatment

Consider suctioning			
	Age < 1 year	**Age** ≥ 1 year to < 12 years	**Age** ≥ 12 years
Dose	suction at 60-100 mmHg	suction at 100-120 mmHg	suction at 100-150 mmHg
Max. single dose	10 seconds	10 seconds	10 seconds
Dosing interval	1 minute	1 minute	1 minute
Max. # of doses	N/A	N/A	N/A

Consider emergency tracheostomy reinsertion
The maximum number of attempts is 2

Clinical Considerations

Suctioning:
Pre-oxygenate with 100% oxygen.
In an alert patient, whenever possible, have patient cough to clear airway prior to suctioning.

Emergency Tracheostomy Reinsertion:
A reinsertion attempt is defined as the insertion of the cannula into the tracheostomy.
A new replacement inner or outer cannula is preferred over cleaning and reusing an existing one.
Utilize a family member or caregiver who is available and knowledgeable to replace the tracheostomy cannula.

Medical Cardiac Arrest Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Non-traumatic cardiac arrest.

Primary Clinical Consideration(s):

In the following settings, consider very early transport after a minimum of one analysis (and defibrillation if indicated) once an egress plan is organized:

1) pregnancy presumed to be ≥ 20 weeks gestation (fundus above umbilicus, ensure manual displacement of uterus to left);
2) hypothermia;
3) airway obstruction;
4) non-opioid drug overdose/toxicology, or;
5) other known reversible cause of the arrest unable to be addressed.

For patients in refractory VF or pulseless VT, transport following 3 rounds of epinephrine (or after 3rd consecutive defibrillation if no IV/IO/CVAD/ETT access). Refractory VF or pulseless VT is defined for the purpose of this directive, as persistent VF or pulseless VT after 3 consecutive shocks.

Conditions

CPR	
Age	N/A
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Performed in 2 minute intervals

Manual Defibrillation (preferred method)	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT

AED or SAED Defibrillation	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Defibrillation indicated Not using manual defibrillation

EPINEPHrine	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Anaphylaxis suspected as causative event, IM route may be used

amiodarone	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT as an equivalent to lidocaine

lidocaine	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT as an equivalent to amiodarone

0.9% NaCl Fluid Bolus	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	PEA **OR** Any other rhythm where hypovolemia is suspected

Medical TOR	
Age	≥ 16 years
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Arrest not witnessed by paramedic **AND** No ROSC after 20 minutes of resuscitation **AND** No defibrillation delivered

Contraindications

CPR
Obviously dead as per BLS PCS
Meet conditions of the BLS PCS *Do Not Resuscitate (DNR) Standard*

Manual Defibrillation
Rhythms other than VF or pulseless VT

AED or SAED Defibrillation
Non-shockable rhythm

EPINEPHrine
Allergy or sensitivity to EPINEPHrine

amiodarone
Allergy or sensitivity to amiodarone

lidocaine
Allergy or sensitivity to lidocaine

0.9% NaCl Fluid Bolus
Fluid overload

Medical TOR
Known reversible cause of the arrest unable to be addressed
Pregnancy presumed to be ≥ 20 weeks gestation
Suspected hypothermia
Airway obstruction
Non-opioid drug overdose/toxicology

Treatment

Consider CPR as per current Heart and Stroke Foundation of Canada Guidelines.

Consider manual defibrillation		
	Age ≥ 24 hours to < 8 years	**Age** ≥ 8 years
Dose	1 defibrillation	1 defibrillation
Initial dose	2 J/kg	As per RBHP / manufacturer
Subsequent dose(s)	4 J/kg	As per RBHP / manufacturer
Dosing interval	2 min	2 min
Max. # of doses	N/A	N/A

Consider AED or SAED defibrillation (if not using manual defibrillation)		
	Age ≥ 24 hours to < 8 years	**Age** ≥ 8 years
Dose	1 defibrillation with or without pediatric attenuator cable	1 defibrillation
Max. single dose	As per RBHP / manufacturer	As per RBHP / manufacturer
Dosing interval	2 min	2 min
Max. # of doses	N/A	N/A

Consider EPINEPHrine (if anaphylaxis is suspected as the causative event of the cardiac arrest)	
	Route
	IM
	Concentration
	1 mg/mL = 1:1,000
Dose	0.01 mg/kg*
Max. single dose	0.5 mg
Dosing interval	N/A
Max. # of doses	1

***The EPINEPHrine dose may be rounded to the nearest 0.05 mg**

Consider EPINEPHrine				
	Age		**Age**	
	≥ 24 hours to < 12 years		≥ 12 years	
	Route		**Route**	
	IV/IO/CVAD	ETT	IV/IO/CVAD	ETT
Solution	0.1 mg/mL = 1:10,000	1 mg/mL = 1:1,000	0.1 mg/mL = 1:10,000	as per RBHP
Dose	0.01 mg/kg* (0.1 mL/kg)	0.1 mg/kg to a max of 2 mg (0.1 mL/kg to a max. of 2 mL)	1 mg	2 mg
Min. single dose	0.05 mg	0.5 mg	1 mg	2 mg
Dosing interval	4 min	4 min	4 min	4 min
Max. # of doses	N/A	N/A	N/A	N/A

***The EPINEPHrine dose may be rounded to the nearest 0.05 mg**

Consider amiodarone		
	Age ≥ 24 hours to < 12 years	**Age** ≥ 12 years
	Route IV/IO/CVAD	**Route** IV/IO/CVAD
Initial dose	5 mg/kg	300 mg
Max. initial dose	300 mg	300 mg
Subsequent dose(s)	5 mg/kg	150 mg
Max. repeat dose	150 mg	150 mg
Dosing interval	4 min	4 min
Max. # of doses	2	2

Consider lidocaine (if not using amiodarone)				
	Age ≥ 24 hours to < 12 years		**Age** ≥ 12 years	
	Route		**Route**	
	IV/IO/CVAD	ETT	IV/IO/CVAD	ETT
Initial dose	1 mg/kg	2 mg/kg	1.5 mg/kg	3 mg/kg
Second dose	1 mg/kg	2 mg/kg	0.75 mg/kg	1.5 mg/kg
Min. single dose	N/A	N/A	N/A	N/A
Dosing interval	4 min	4 min	4 min	4 min
Max. # of doses	2	2	2	2

Consider 0.9% NaCl fluid bolus		
	Age ≥ 24 hours to < 12 years	**Age** ≥ 12 years
	Route IV/IO/CVAD	**Route** IV/IO/CVAD
Infusion	20 ml/kg	20 ml/kg
Infusion interval	Immediate	Immediate
Reassess every	100 ml	250 ml
Max. volume	2,000 ml	2,000 ml

Mandatory Provincial Patch Point

Patch to consider Medical TOR (if applicable).

If the patch fails or if Medical TOR does not apply, transport to the closest appropriate hospital following ROSC or 20 minutes of resuscitation without ROSC.

Patch early (e.g. following the 4th analysis) to consider TOR if there are extenuating circumstances; prolonged egress, prolonged transport or significant clinical limitations where the paramedic considers ongoing resuscitation to be futile.

Clinical Considerations

Consider regional base hospital program advanced airway strategy where more than OPA/NPA and BVM is required.

There is no clear role for routine administration of naloxone in confirmed cardiac arrest.

The IV/IO/CVAD routes of medication administration are preferred over the ETT route. However, ETT administration may be used if the IV/IO/CVAD routes are delayed (e.g. ≥ 5 min).

The BHP might **not** authorize TOR even though the patient meets TOR rule. Factors may include: location of the patients, $EtCO_2$, age, bystander witnessed, bystander CPR, transportation time, and unusual cause of cardiac arrest such as electrocution, hanging, and toxicology.

The BHP may authorize TOR even though the patient does **not** meet the TOR rule. Factors that may be taken into account include extenuating egress limitations, prolonged transport, caregiver wishes, existence of DNR confirmation form, and underlying end stage progressive illness.

Defibrillation Joule Settings

This section is intentionally left blank.

Trauma Cardiac Arrest Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Cardiac arrest secondary to severe blunt or penetrating trauma.

Conditions

CPR	
Age	N/A
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Performed in 2 minute intervals

Manual defibrillation	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT

AED or SAED Defibrillation	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Defibrillation indicated If not using manual defibrillation

Needle thoracostomy	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected tension pneumothorax **AND** absent or severely diminished breath sound on the affected side(s)

Trauma TOR	
Age	≥ 16 years
LOA	Altered
HR	0
RR	0
SBP	N/A
Other	No palpable pulses **AND** No defibrillation delivered **AND** Rhythm Asystole **AND** No signs of life at any time since fully extricated **OR** Signs of life when fully extricated with the closest ED ≥30 min transport time away **OR** Rhythm PEA with the closest ED ≥30 min transport time away.

Contraindications

CPR
Obviously dead as per BLS PCS
Meet conditions of the BLS PCS *Do Not Resuscitate (DNR) Standard*

AED or SAED Defibrillation
Non-shockable rhythm

Needle thoracostomy
N/A

Manual Defibrillation
Rhythms other than VF or pulseless VT

Trauma TOR
Age <16 years
Defibrillation delivered
Signs of life at any time since fully extricated.
Rhythm PEA and closest ED <30 min transport time away
Patients with penetrating trauma to the torso or head/neck and Lead Trauma Hospital < 30 min transport time away

Treatment

Consider CPR as per current Heart and Stroke Foundation of Canada Guidelines

Consider Manual defibrillation (if available and authorized)

	Age ≥ 24 hours to < 8 years	**Age** ≥ 8 years
Dose	1 defibrillation	1 defibrillation
Initial dose	2 J/kg	As per RBHP / manufacturer
Dosing interval	N/A	N/A
Max. # of doses	1	1

Consider AED or SAED defibrillation (if not using manual defibrillation)		
	Age ≥ 24 hours to < 8 years	**Age** ≥ 8 years
Dose	1 defibrillation with or without pediatric attenuator cable	1 defibrillation
Max. single dose	As per RBHP / manufacturer	As per RBHP / manufacturer
Dosing Interval	N/A	N/A
Max. # of doses	1	1

Consider needle thoracostomy

Mandatory Provincial Patch Point

Patch to BHP for authorization to apply the Trauma TOR if applicable. If the BHP patch fails, or the Trauma TOR does not apply, transport to the closest appropriate receiving facility following the 1st analysis/defibrillation.

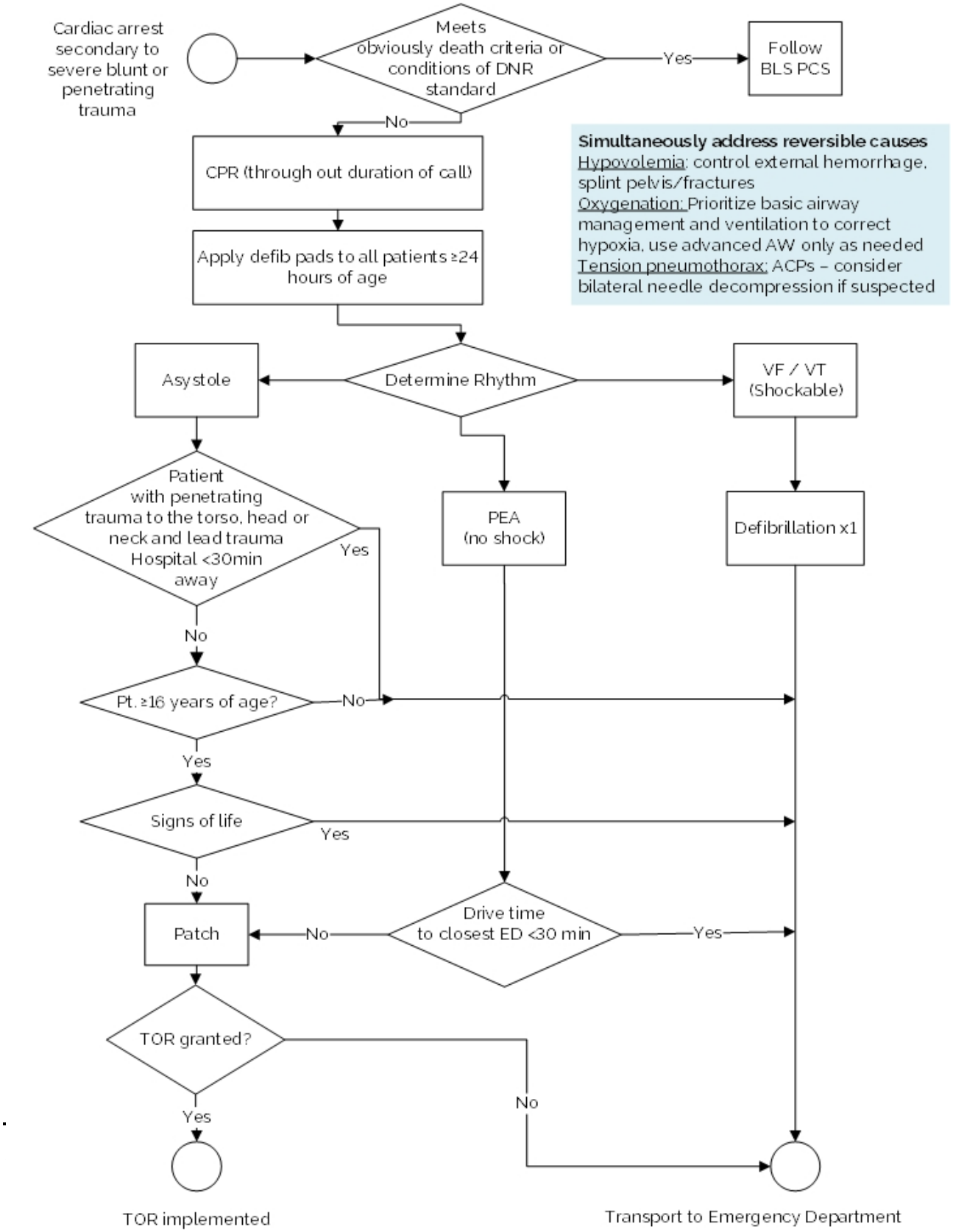
Clinical Considerations

If no obvious external signs of significant blunt trauma, consider medical cardiac arrest and treat according to the appropriate medical cardiac arrest directive.

Signs of life: specifically any spontaneous movement, respiratory efforts, organized electrical activity on ECG, and reactive pupils.

An intravenous fluid bolus may be considered, where it does not delay transport and should not be prioritized over management of other reversible pathology.

Treatment – Algorithm For Trauma Arrest



Newborn Resuscitation Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Newborn patient.

Conditions

PPV	
Age	< 24 hours
LOA	N/A
HR	< 100 bpm
RR	N/A
SBP	N/A
Other	N/A

CPR	
Age	< 24 hours
LOA	N/A
HR	< 60 bpm
RR	N/A
SBP	N/A
Other	After 30 seconds of PPV using room air

EPINEPHrine	
Age	< 24 hours
LOA	N/A
HR	< 60 bpm
RR	N/A
SBP	N/A
Other	After 30 seconds of PPV **AND** 30 seconds of CPR

Contraindications

PPV
Obviously dead as per BLS PCS
Presumed gestational age less than 20 weeks

CPR
Obviously dead as per BLS PCS
Presumed gestational age less than 20 weeks

EPINEPHrine
Allergy or sensitivity to EPINEPHrine
Presumed gestational age less than 20 weeks

Treatment

Consider PPV as per the treatment flowchart

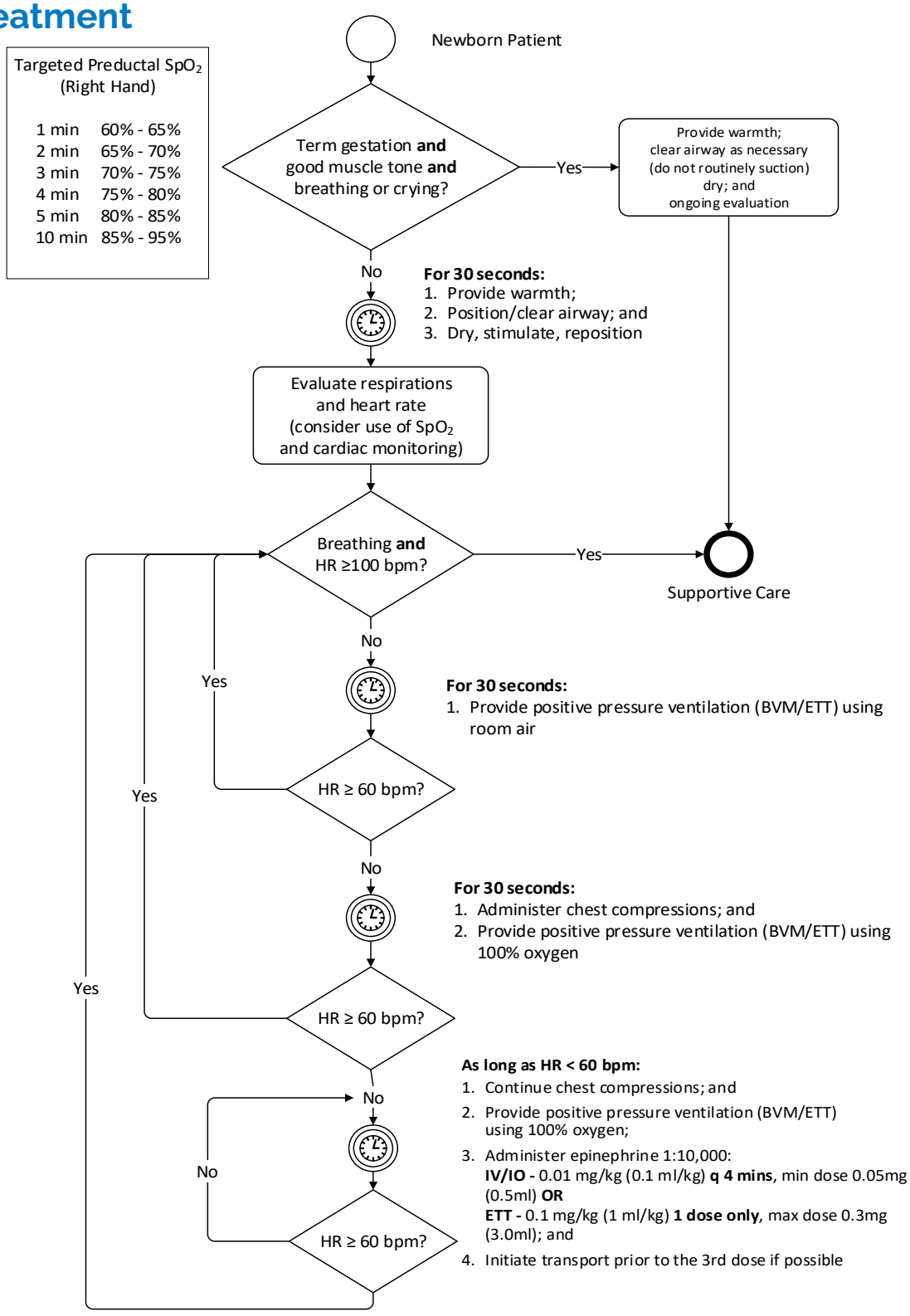
Consider CPR as per current Heart and Stroke Foundation of Canada Guidelines

Consider EPINEPHrine

	Age	
	< 24 hours	
	Route	
	IV/IO	ETT*
Solution	0.1 mg/mL = 1:10,000	0.1 mg/mL = 1:10,000
Dose	0.01 mg/kg (0.1 mL/kg)	0.1 mg/kg (1.0 mL/kg)
Min. single dose	0.05 mg (0.5 mL)	N/A
Max. single dose	N/A	0.3 mg (3.0 mL)
Dosing interval	4 min	N/A
Max. # of doses	N/A	1

*** EPINEPHrine is to be administered IV/IO after the single ETT dose if the conditions are still met**

Treatment


Targeted Preductal SpO_2 (Right Hand)
1 min 60% - 65%
2 min 65% - 70%
3 min 70% - 75%
4 min 75% - 80%
5 min 80% - 85%
10 min 85% - 95%
Newborn Patient
Term gestation and good muscle tone and breathing or crying?
Yes
Provide warmth; clear airway as necessary (do not routinely suction) dry; and ongoing evaluation
No
For 30 seconds:
1. Provide warmth;
2. Position/clear airway; and
3. Dry, stimulate, reposition
Evaluate respirations and heart rate (consider use of SpO_2 and cardiac monitoring)
Breathing and HR ≥100 bpm?
Yes
Supportive Care
No
For 30 seconds:
1. Provide positive pressure ventilation (BVM/ETT) using room air
HR ≥ 60 bpm?
Yes
No
For 30 seconds:
1. Administer chest compressions; and
2. Provide positive pressure ventilation (BVM/ETT) using 100% oxygen
HR ≥ 60 bpm?
Yes
No
As long as HR < 60 bpm:
1. Continue chest compressions; and
2. Provide positive pressure ventilation (BVM/ETT) using 100% oxygen;
3. Administer epinephrine 1:10,000:
IV/IO - 0.01 mg/kg (0.1 ml/kg) q 4 mins, min dose 0.05mg (0.5ml) OR
ETT - 0.1 mg/kg (1 ml/kg) 1 dose only, max dose 0.3mg (3.0ml); and
4. Initiate transport prior to the 3rd dose if possible
HR ≥ 60 bpm?
No
Yes

Clinical Considerations

If newborn resuscitation is required, initiate cardiac monitoring and right-hand pulse oximetry monitoring.

Infants born between 20-25 weeks gestation may be stillborn or die quickly. Initiate resuscitation and transport as soon as feasible.

If gestational age cannot be confirmed, initiate resuscitation and rapid transport.

If newborn is less than 20 weeks gestation, resuscitation is futile. Provide the newborn with warmth and consider patching to BHP for further direction.

Return of Spontaneous Circulation (ROSC) Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Patient with return of spontaneous circulation (ROSC) after the resuscitation was initiated.

Conditions

0.9% NaCl Fluid Bolus	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	Hypotension
Other	Chest auscultation is clear

DOPamine	
Age	≥ 8 years
LOA	N/A
HR	N/A
RR	N/A
SBP	Hypotension
Other	N/A

Contraindications

0.9% NaCl Fluid Bolus
Fluid overload

DOPamine
Allergy or sensitivity to DOPamine
Tachydysrhythmias excluding sinus tachycardia
Mechanical shock
Pheochromocytoma

Treatment

Consider optimizing ventilation and oxygenation
Titrate oxygenation 94-98%
Avoid hyperventilation and target $ETCO_2$ to 30-40 mmHg with continuous waveform capnography (if available)

Consider 0.9% NaCl fluid bolus		
	Age < 12 years	**Age** ≥ 12 years
	Route IV/IO/CVAD	**Route** IV/IO/CVAD
Infusion	10 ml/kg	10 ml/kg
Infusion interval	Immediate	Immediate
Reassess every	100 ml	250 ml
Max. volume	1,000 ml	1,000 ml

Consider DOPamine	
	Age ≥ 8 years
	Route IV
Initial infusion rate	5 mcg/kg/min
Titration increment	5 mcg/kg/min
Titration interval	5 min
Max. infusion rate	20 mcg/kg/min

NOTE: Titrate DOPamine to achieve a SBP of ≥90 to <110 mmHg. If discontinuing DOPamine electively, do so gradually over 5-10 minutes.

Consider 12-lead ECG acquisition and interpretation

Clinical Considerations

Consider initiating transport in parallel with the above treatment.

Adult IO administration of a NaCl bolus requires the ACP to be authorized.

Notify receiving hospital staff if DOPamine drip goes interstitial.

Single Strength DOPamine Dosing Chart

DOPamine INFUSION RATE (ml/hr or drops/min with a microdrip set) [Using an 800 mcg/ml ('single strength') solution]

Weight (kg)	Drip Rate (drops/min)				
	2 (mcg/kg/minute)	5 (mcg/kg/minute)	10 (mcg/kg/minute)	15 (mcg/kg/minute)	20 (mcg/kg/minute)
5	1	2	4	6	8
10	2	4	8	11	15
15	2	6	11	17	23
20	3	8	15	23	30
25	4	9	19	28	38
30	5	11	23	34	45
35	5	13	26	39	53
40	6	15	30	45	60
45	7	17	34	51	68
50	8	19	38	56	75
55	8	21	41	62	83
60	9	23	45	68	90
65	10	24	49	73	98
70	11	26	53	79	105
75	11	28	56	84	113
80	12	30	60	90	120
85	13	32	64	96	128
90	14	34	68	101	135
95	14	36	71	107	143
100	15	38	75	113	150
105	16	39	79	118	158
110	17	41	83	124	165
115	17	43	86	129	173
120	18	45	90	135	180

Cardiac Ischemia Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Suspected cardiac ischemia.

Conditions

ASA	
Age	≥ 18 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	Able to chew and swallow

nitroglycerin	
Age	≥ 18 years
LOA	Unaltered
HR	60-159 bpm
RR	N/A
SBP	Normotension
Other	Prior history of nitroglycerin use **OR** IV access obtained

morphine	
Age	≥ 18 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	Normotension
Other	Severe pain

Contraindications

ASA
Allergy or sensitivity to NSAIDs
If asthmatic, no prior use of ASA
Current active bleeding
CVA or TBI in the previous 24 hours

morphine
Allergy or sensitivity to morphine
SBP drops by one-third or more of its initial value after morphine is administered

nitroglycerin
Allergy or sensitivity to nitrates
Phosphodiesterase inhibitor use within the previous 48 hours
SBP drops by one-third or more of its initial value after nitroglycerin is administered
12-lead ECG compatible with Right Ventricular MI

Treatment

Consider ASA	
	Route
	PO
Dose	160-162 mg
Max. single dose	162 mg
Dosing interval	N/A
Max. # of doses	1

Consider 12-lead ECG acquisition and interpretation for STEMI

Consider nitroglycerin		
	STEMI	
	No	Yes
	SBP	**SBP**
	≥100 mmHg	≥100 mmHg
	Route	**Route**
	SL	SL
Dose	0.3 mg **OR** 0.4 mg	0.3 mg **OR** 0.4 mg
Max. single dose	0.4 mg	0.4 mg
Dosing interval	5 min	5 min
Max. # of doses	6	3

Consider morphine (after the 3rd dose of nitroglycerin or if nitroglycerin is contraindicated)	
	Route
	IV
Dose	2 mg
Max. single dose	2 mg
Dosing interval	5 min
Max. # of doses	5

Clinical Considerations

Suspect a Right Ventricular MI in all inferior STEMIs and perform at minimum V4R to confirm (ST-elevation ≥ 1mm in V4R).

Do not administer nitroglycerin to a patient with Right Ventricular STEMI.

Apply defibrillation pads when a STEMI is identified.

The goal for time to 12-lead ECG from first medical contact is < 10 minutes where possible.

Acute Cardiogenic Pulmonary Edema Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Moderate to severe respiratory distress;

AND

Suspected acute cardiogenic pulmonary edema.

Conditions

	nitroglycerin
Age	≥ 18 years
LOA	N/A
HR	60-159 bpm
RR	N/A
SBP	Normotension
Other	N/A

Contraindications

nitroglycerin
Allergy or sensitivity to nitrates
Phosphodiesterase inhibitor use within the previous 48 hours
SBP drops by one-third or more of its initial value after nitroglycerin is administered

Treatment

Consider nitroglycerin			
	SBP ≥ 100 mmHg to < 140 mmHg	**SBP** ≥ 140 mmHg	
	IV or Hx* Yes	**IV or Hx*** No	**IV or Hx*** Yes
	Route SL	**Route** SL	**Route** SL
Dose	0.3 mg **or** 0.4 mg	0.3 mg **or** 0.4 mg	0.6 mg **or** 0.8 mg
Max. single dose	0.4 mg	0.4 mg	0.8 mg
Dosing interval	5 min	5min	5 min
Max. # of doses	6	6	6

***Hx refers to a patient with a prior history of nitroglycerin use**

Consider 12-lead ECG acquisition and interpretation

Clinical Considerations

N/A

Cardiogenic Shock Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

STEMI-positive 12-lead ECG; AND

Cardiogenic shock.

Conditions

0.9% NaCl Fluid Bolus	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	Hypotension
Other	Chest auscultation is clear

DOPamine	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	Hypotension
Other	N/A

Contraindications

0.9% NaCl Fluid Bolus	DOPamine
Fluid overload	Allergy or sensitivity to DOPamine
SBP ≥90 mmHg	Tachydysrhythmias excluding sinus tachycardia
	Mechanical shock
	Hypovolemia
	Pheochromocytoma

Treatment

Consider 0.9% NaCl fluid bolus	
	Age
	≥ 18 years
	Route
	IV/IO/CVAD
Infusion	10 ml/kg
Infusion interval	N/A
Reassess every	250 ml
Max. volume	1,000 ml

NOTE: If NaCl bolus contraindicated due to pulmonary crackles, consider DOPamine.

Consider DOPamine	
	Route
	IV
Initial infusion rate	5 mcg/kg/min
Titration increment	5 mcg/kg/min
Titration interval	5 min
Max. infusion rate	20 mcg/kg/min

NOTE: Titrate DOPamine to achieve a SBP of ≥90 to <110 mmHg. If discontinuing DOPamine electively, do so gradually over 5-10 minutes.

Clinical Considerations

Contact BHP if patient is bradycardic.

Symptomatic Bradycardia Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Bradycardia;

AND

Hemodynamic instability.

Conditions

atropine	
Age	≥ 18 years
LOA	N/A
HR	< 50 bpm
RR	N/A
SBP	Hypotension
Other	N/A

Transcutaneous Pacing	
Age	≥ 18 years
LOA	N/A
HR	< 50 bpm
RR	N/A
SBP	Hypotension
Other	N/A

DOPamine	
Age	≥ 18 years
LOA	N/A
HR	< 50 bpm
RR	N/A
SBP	Hypotension
Other	N/A

Contraindications

atropine
Allergy or sensitivity to atropine
Hypothermia
History of heart transplant

Transcutaneous Pacing
Hypothermia

DOPamine
Allergy or sensitivity to DOPamine
Mechanical shock
Pheochromocytoma

Treatment

Consider Rhythm determination

Consider 12-lead ECG acquisition and interpretation (if this won't delay therapy)

Consider atropine	
	Route
	IV
Dose	1 mg
Max. single dose	1 mg
Dosing interval	5 min
Max. # of doses	2

Consider transcutaneous pacing

Consider DOPamine	
	Route
	IV
Initial infusion rate	5 mcg/kg/min
Titration increment	5 mcg/kg/min
Titration interval	5 min
Max. infusion rate	20 mcg/kg/min

NOTE: Titrate DOPamine to achieve a SBP of ≥90 to <110 mmHg. If discontinuing DOPamine electively, do so gradually over 5-10 minutes.

Clinical Considerations

TCP should not be delayed for placement of an IV.

A fluid bolus should be considered with all symptomatic bradycardia patients if indicated.

Tachydysrhythmia Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Symptomatic Tachydysrhythmia.

Conditions

Valsalva Maneuver	
Age	≥ 18 years
LOA	Unaltered
HR	≥ 150 bpm
RR	N/A
SBP	Normotension
Other	Narrow complex and regular rhythm

adenosine	
Age	≥ 18 years
LOA	Unaltered
HR	≥ 150 bpm
RR	N/A
SBP	Normotension
Other	Narrow complex and regular rhythm

amiodarone	
Age	≥ 18 years
LOA	Unaltered
HR	≥ 120 bpm
RR	N/A
SBP	Normotension
Other	Wide complex and regular rhythm

lidocaine	
Age	≥ 18 years
LOA	Unaltered
HR	≥ 120 bpm
RR	N/A
SBP	Normotension
Other	Wide complex and regular rhythm

Synchronized Cardioversion	
Age	≥ 18 years
LOA	N/A
HR	≥ 120 bpm (wide) **OR** ≥ 150 bpm (narrow)
RR	N/A
SBP	Hypotension
Other	Altered mental status, ongoing chest pain, other signs of shock

Contraindications

Valsalva Maneuver
Sinus tachycardia or atrial fibrillation or atrial flutter

amiodarone
Allergy or sensitivity to amiodarone

lidocaine
Allergy or sensitivity to lidocaine

Synchronized Cardioversion
N/A

adenosine
Allergy or sensitivity to adenosine
Sinus tachycardia or atrial fibrillation or atrial flutter
Patient taking dipyridamole or carbamazepine
Bronchoconstriction on exam

Treatment

Consider rhythm determination (confirm regularity)

Consider 12-lead ECG acquisition and interpretation to confirm QRS width (if this won't delay therapy)

Consider modified valsalva maneuver

Perform a maximum of 2 attempts lasting 10 to 20 seconds duration each.

Consider adenosine	
	Route
	IV
Initial dose	6 mg
Subsequent dose	12 mg
Dosing interval	2 min
Max. # of doses	2

Mandatory Provincial Patch Point

Patch to BHP for authorization to proceed with amiodarone or lidocaine or if monomorphic wide complex regular rhythm for adenosine.

Consider amiodarone OR lidocaine (if not using amiodarone)		
	Medication	**Medication**
	amiodarone	lidocaine
	Route	**Route**
	IV*	IV
Initial dose	150 mg	1.5 mg/kg
Subsequent dose	150 mg	0.75 mg/kg
Max. single dose	150 mg	150 mg
Dosing interval	10 min	10 min
Max. # of doses	2	3

***Amiodarone should be administered by IV infusion over 10 min.**

Mandatory Provincial Patch Point

Patch to BHP for authorization to proceed with synchronized cardioversion.

Consider synchronized cardioversion

Administer up to 3 synchronized shocks in accordance with BHP direction and energy settings. (In the setting of a patch failure, the energy settings to be used are 100 J, 200 J and the maximum manufacturer setting.)

Clinical Considerations

N/A

Considerations for Treat and Discharge (if authorized)

The patient must meet all of the following criteria:

- ☐ the patient is ≥18 AND <65 years old;
- ☐ patient must have a prior history of SVT;
- ☐ the patient presented with narrow complex and regular rhythm Supraventricular Tachycardia (SVT);
- ☐ the patient must have only had a single SVT episode in the past 24 hours
- ☐ the patient has returned to normal sinus rhythm (NSR) either spontaneously, with a valsalva maneuver or with adenosine treatment by paramedics and is now asymptomatic;
- ☐ the patient has returned to their normal level of consciousness;
- ☐ a complete set of vital signs are within expected normal ranges with a HR <100bpm and the patient remains in NSR for at least 15 minutes post conversion;

AND

- ☐ the patient was not treated with electrical cardioversion by paramedics;
- ☐ the patient is not pregnant;
- ☐ the SVT must not be related to alcohol or substance abuse or withdrawal, and;
- ☐ the patient has no fever or preceding illness.

In addition to the above criteria, if all of the following requirements have been met, the patient can be discharged by paramedics:

- ☐ a responsible adult agrees to remain with the patient for the next 4 hours;
- ☐ all of the patient or substitute decision makers questions were answered and a care plan was developed;
- ☐ the patient or substitute decision maker has been advised to follow up with their primary health care team or provider;
- ☐ clear instructions to call 911 were provided should symptoms redevelop;
- ☐ patient or substitute decision maker has the ability to access 911 should symptoms redevelop, and;
- ☐ patient or substitute decision maker consents to the discharge.

Clinical Considerations (Treat and Discharge)

Patch to BHP for consultation if you are unclear if the patient meets all of the discharge criteria.

Hyperkalemia Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Suspected hyperkalemia in patients at high risk, including:

Currently on dialysis; **OR**

History of end-stage renal disease; **OR**

Relevant incident history (*i.e.* prolonged crush injury)

AND

One of the following clinical situations:

Cardiac Arrest; **OR**

Pre-arrest with 12-lead ECG changes associated with hyperkalemia.

Conditions

calcium gluconate 10%	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

salbutamol	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

calcium gluconate	salbutamol
Allergy or sensitivity to calcium gluconate	Allergy or sensitivity to salbutamol

Treatment

Consider 12-lead ECG acquisition and interpretation

Consider calcium gluconate 10%

	Route
	IV/IO/CVAD
Dose	1 g (10 ml) over 2-3 minutes
Max. single dose	1 g (10 ml)
Dosing interval	5 minutes
Max. # of doses	2*

***Note: an additional 3rd dose may be administered after 30 minutes if the patient improved initially and symptoms meeting the indications recur.**

Consider salbutamol

	Route	
	MDI*	NEB
Dose	1,600 mcg (16 puffs)	10 mg
Max. single dose	1,600 mcg	10 mg
Dosing interval	Immediate	Immediate
Max. # of doses	2	2

***1 puff=100 mcg**

Consider 12-lead ECG acquisition and interpretation

Clinical Considerations

In the Indications, the pre-arrest patient would present with one or more of the following: hypotension, altered levels of awareness, or symptomatic bradycardia.

12-lead changes suggestive of hyperkalemia are wide and bizarre QRS complexes [≥120 ms], peaked T waves, loss of P waves and/or a QRS complex with a "sine wave" appearance. 12-lead acquisition is intended for the patient not in cardiac arrest to establish the QRS duration before and after treatment.

Whenever possible, both calcium gluconate and salbutamol should be administered as the 2 medications have different modes of action.

The action of calcium gluconate is often visible through the normalization of observed ECG changes of hyperkalemia. If ECG changes do not improve, or if they worsen, additional doses may be required. The duration of action is 20-60 minutes: consider repeat dosing if ECG changes recur during extended transport times.

Caution that calcium gluconate should only be administered in an IV/IO/CVAD that is running well.

Calcium gluconate and sodium bicarbonate should not be mixed or administered in the same IV without flushing well.

Intravenous and Fluid Therapy Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Actual or potential need for intravenous medication **OR** fluid therapy.

Conditions

IV Cannulation	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

0.9% NaCl Fluid Bolus	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	Hypotension
Other	N/A

Contraindications

IV Cannulation
Suspected fracture proximal to the access site

0.9% NaCl Fluid Bolus
Fluid overload

Treatment

Consider IV cannulation

Consider 0.9% NaCl maintenance infusion		
	Age < 12 years	**Age** ≥ 12 years
	Route IV/IO/CVAD	**Route** IV/IO/CVAD
Infusion	15 ml/hr	30-60 ml/hr
Infusion interval	N/A	N/A
Reassess every	N/A	N/A
Max. volume	N/A	N/A

Mandatory Provincial Patch Point
Patch to BHP for authorization to administer 0.9% NaCl fluid bolus to hypotensive patients <12 years with suspected Diabetic Ketoacidosis (DKA).

Consider 0.9% NaCl fluid bolus		
	Age < 12 years	**Age** ≥ 12 years
	Route IV/IO/CVAD	**Route** IV/IO/CVAD
Infusion	20 ml/kg	20 ml/kg
Infusion interval	Immediate	Immediate
Reassess every	100 ml	250 ml
Max. volume*	2,000 ml	2,000 ml

***The maximum volume of 0.9% NaCl is lower for patients in cardiogenic shock and return of spontaneous circulation.**

Clinical Considerations

Adult IO and CVAD procedures are auxiliary Medical Directives described elsewhere. Fluid administration via the IO or CVAD routes only apply to paramedics authorized to perform these procedures.

Microdrips and/or volume control administration sets should be considered when IV/CVAD access is indicated for patients <12 years of age.

An intravenous fluid bolus may be considered for a patient who does not meet trauma TOR criteria, where it does not delay transport and should not be prioritized over management of other reversible causes.

Pediatric Intraosseous Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Actual or potential need for intravenous medication **OR** fluid therapy;

AND

Intravenous access is unobtainable;

AND

Cardiac arrest or pre-arrest state.

Conditions

	IO
Age	< 12 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

IO
Fracture or crush injuries proximal to the access site
Suspected or known replacement / prosthesis proximal to the access site

Treatment

Consider IO access

Clinical Considerations

N/A

Central Venous Access Device Access Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Actual or potential need for intravenous medication **OR** fluid therapy;

AND

IV access is unobtainable;

AND

Cardiac arrest or pre-arrest state.

Conditions

	CVAD Access
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Patient has a CVAD with an accessible external lumen

Contraindications

CVAD Access
Inability to confirm patency of CVAD line
Inability to flush or aspirate
Injury or suspected fracture proximal to the access site
Swelling of the involved limb
Bleeding at the insertion site

Treatment

Consider CVAD access

Clinical Considerations

N/A

Hypoglycemia Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Suspected hypoglycemia

Conditions

dextrose	
Age	N/A
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Hypoglycemia

glucagon	
Age	N/A (≥4 years for IN powder)
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Hypoglycemia

Contraindications

dextrose
Allergy or sensitivity to dextrose

glucagon
Allergy or sensitivity to glucagon
Pheochromocytoma

Treatment

Consider glucometry

Consider dextrose (D50W diluted as required if not using D10W)

	Age < 2 years	**Age** ≥ 2 years	
	Concentration 10% dextrose	**Concentration** 10% dextrose	**Concentration** 50% dextrose
	Route IV	**Route** IV	**Route** IV
Dose	0.2 g/kg (2 ml/kg)	0.2 g/kg (2 ml/kg)	0.5 g/kg (1 ml/kg)
Max. single dose	5 g (50 ml)	25 g (250 ml)	25 g (50 ml)
Dosing interval	10 min	10 min	10 min
Max. # of doses	2	2	2

Titrate dextrose to a level of awareness where the patient can safely consume complex carbohydrate.

Consider glucagon (if not using dextrose)			intranasal powder (If authorized and available)
	Age N/A		**Age** ≥ 4 years
	Weight < 25 kg	**Weight** ≥ 25 kg	**Weight** N/A
	Route IM	**Route** IM	**Route** IN
Dose	0.5 mg	1 mg	3 mg
Max. single dose	0.5 mg	1 mg	3 mg
Dosing interval	20 min	20 min	20 min
Max. # of doses	2	2	2

Clinical Considerations

If the patient responds to dextrose or glucagon, he/she may receive oral glucose or other simple carbohydrates.

If only mild signs or symptoms are exhibited, the patient may receive oral glucose or other simple carbohydrates instead of dextrose or glucagon.

If a patient initiates an informed refusal of transport, a final set of vital signs including blood glucometry must be attempted and documented.

Intranasal glucagon is a powder that is supplied in a commercially available single-dose intranasal device.

Considerations for Treat and Discharge (if authorized)

All of the following criteria must be met:

- ☐ the patient is ≥18 AND <65 years old;
- ☐ the patient has a diagnosis of diabetes;
- ☐ the hypoglycemia can be explained by insulin administration with inadequate oral intake;
- ☐ the hypoglycemia promptly responded to a single administration of dextrose or glucagon as per the Medical Directive and/or consumed oral glucose or other complex carbohydrates;
- ☐ this was a single isolated episode of symptomatic hypoglycemia within the past 24 hours;
- ☐ the blood glucose is ≥4.0mmol/L after treatment;
- ☐ the patient has returned to their normal level of consciousness and is asymptomatic;
- ☐ a complete set of vital signs are within expected normal ranges;

AND

- ☐ not an intentional overdose;
- ☐ the hypoglycemia must not be related to alcohol or substance abuse or withdrawal;
- ☐ no seizure or reported history of seizure prior to paramedic treatment;
- ☐ not on an oral hypoglycemic medication;
- ☐ hypoglycemia is not considered to be related to an acute medical illness, and;
- ☐ the patient is not pregnant.

In addition to the above criteria, if all of the following requirements have been met, the patient can be discharged by paramedics:

- ☐ the patient has access to appropriate carbohydrates;
- ☐ a responsible adult agrees to remain with the patient for the next 4 hours;
- ☐ all of the patient or substitute decision makers questions were answered and a care plan was developed;
- ☐ the patient or substitute decision maker has been advised to follow up with their primary health care team or provider;

- clear instructions to call 911 were provided should symptoms redevelop;
- patient or substitute decision maker has the ability to access 911 should symptoms redevelop, and
- patient or substitute decision maker consents to the discharge.

Clinical Considerations (Treat and Discharge)

Patch to BHP for consultation if you are unclear if the patient meets all of the discharge criteria.

Seizure Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Active generalized motor seizure.

Conditions

	midazolam
Age	N/A
LOA	Unresponsive
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

midazolam
Allergy or sensitivity to midazolam

Treatment

Consider midazolam		
	Route	
	IV / IO	IM / IN / Buccal
Dose	0.1 mg/kg	0.2 mg/kg
Max. single dose	5 mg	10 mg
Dosing interval	5 min	5 min
Max. # of doses	2	2

Clinical Considerations

Conditions such as cardiac arrest and hypoglycemia often present as seizure and should be considered by a paramedic.

Do not delay midazolam administration for blood glucometry in cases where hypoglycemia is not thought to be the causative agent.

Blood glucose should be routinely checked in patients who do not respond to midazolam or have not returned to their baseline LOA after a seizure.

Considerations for Treat and Discharge (if authorized)

All of the following criteria must be met:

- ☐ the patient is ≥18 AND <65 years old;
- ☐ patient must have a history of epilepsy;
- ☐ the patient is taking their anticonvulsant medication as prescribed;
- ☐ the patient must have only had a single seizure episode in the past 24 hours;
- ☐ the seizure pattern and duration must be similar to past seizures;
- ☐ the patient has returned to their normal level of consciousness and is asymptomatic;
- ☐ a complete set of vital signs including temperature are within expected normal ranges;

AND

- the seizure must not be related to hypoglycemia, alcohol or substance abuse or withdrawal;
- the patient must not have received midazolam by paramedics;
- the patient did not injure themselves during seizure activity;
- the patient must not have a fever, preceding illness or recently started a new medication, and;
- the patient is not pregnant.

In addition to the above criteria, if all of the following requirements have been met, the patient can be discharged by paramedics:

- a responsible adult agrees to remain with the patient for the next 4 hours;
- all of the patient or substitute decision makers questions were answered and a care plan was developed;
- the patient or substitute decision maker has been advised to follow up with their primary health care team or provider;
- clear instructions to call 911 were provided should symptoms redevelop;
- patient or substitute decision maker has the ability to access 911 should symptoms redevelop, and;
- patient or substitute decision maker consents to the discharge.

Clinical Considerations (Treat and Discharge)

Patch to BHP for consultation if you are unclear if the patient meets all of the discharge criteria.

Opioid Toxicity and Withdrawal Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Suspected opioid toxicity.

Conditions

naloxone	
Age	≥ 24 hours
LOA	Altered
HR	N/A
RR	< 10 breaths/min
SBP	N/A
Other	Inability to adequately ventilate **OR** persistent need to assist ventilations

buprenorphine/naloxone	
Age	≥ 16
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	Received naloxone for current opioid toxicity episode **AND** Patient is exhibiting acute withdrawal with a COWS* score **≥** 8

Contraindications

naloxone
Allergy or sensitivity to naloxone

buprenorphine/naloxone
Allergy or sensitivity to buprenorphine
Taken methadone in the past 72 hours

Treatment

Consider naloxone				
	Route	**Route**	**Route**	**Route**
	IV/IO	IM	IN	SC
Dose	Up to 0.4 mg**	0.4 mg	2-4 mg	0.8 mg
Max. single dose	0.4 mg	0.4 mg	2-4 mg	0.8 mg
Dosing interval	5 min	5 min	5 min	5 min
Max. # of doses	3	3	3	3

**For the IV route, titrate naloxone only to restore the patient's respiratory status.

Consider buprenorphine/naloxone (if available and authorized)	
	Route
	BUC/SL
Initial dose	16 mg
Subsequent dose(s)	8 mg
Dosing interval	10 minutes
Max. cumulative dose	24 mg

Clinical Considerations

Upfront aggressive management of the airway is paramount and the initial priority.

If no response to initial treatment; consider patching for further doses.

If the patient does not respond to airway management and the administration of naloxone, glucometry should be considered.

Combative behaviour should be anticipated following naloxone administration and paramedics should protect themselves accordingly, thus the importance of gradual titrating (if given IV) to desired clinical effect: respiratory rate ≥10, adequate airway and ventilation, not full alertness.

*Clinical Opiate Withdrawal Scale (COWS)

< 5 – No active withdrawal	13-24 – Moderate withdrawal	> 36 – Severe withdrawal
5-12 – Mild withdrawal	25-36 – Moderately severe withdrawal	

A score of ≥ 8 is an indication for buprenorphine/naloxone administration

Resting Pulse Rate _____ beats/minute *Measured after patient is sitting or lying for one minute* 0 pulse rate 80 or below 1 pulse rate 81–100 2 pulse rate 101–120 4 pulse rate greater than 120	**GI Upset** *over last ½ hour* 0 no GI symptoms 1 stomach cramps 2 nausea or loose stool 3 vomiting or diarrhea 5 multiple episodes of diarrhea or vomiting
Sweating *over past ½ hour not accounted for by room temperature or patient activity* 0 no report of chills or flushing 1 subjective report of chills or flushing 2 flushed or observable moistness on face 3 beads of sweat on brow or face 4 sweat streaming off face	**Tremor** *observation of outstretched hands* 0 no tremor 1 tremor can be felt, but not observed 2 slight tremor observable 4 gross tremor or muscle twitching
Restlessness *observation during assessment* 0 able to sit still 1 reports difficulty sitting still, but is able to do so 3 frequent shifting or extraneous movements of legs/arms 5 unable to sit still for more than a few seconds	**Yawning** *observation during assessment* 0 no yawning 1 yawning once or twice during assessment 2 yawning three or more times during assessment 4 yawning several times/minute
Pupil Size 0 pupils pinned or normal size for room light 1 pupils possibly larger than normal for room light 2 pupils moderately dilated 5 pupils so dilated that only the rim of the iris is visible	**Anxiety or Irritability** 0 none 1 patient reports increasing irritability or anxiousness 2 patient obviously irritable anxious 4 patient so irritable or anxious that participation in the assessment is difficult
Bone or Joint Aches *If patient was having pain previously, only the additional component attributed to opiates withdrawal is scored* 0 not present 1 mild diffuse discomfort 2 patient reports severe diffuse aching of joints/muscles 4 patient is rubbing joints or muscles and is unable to sit still because of discomfort	**Gooseflesh Skin** 0 skin is smooth 3 piloerrection of skin can be felt or hairs standing up on arms 5 prominent piloerrection
Runny Nose or Tearing *Not accounted for by cold symptoms or allergies* 0 not present 1 nasal stuffiness or unusually moist eyes 2 nose running or tearing 4 nose constantly running or tears streaming down cheeks	**Total Score** _____ *The total score is the sum of all 11 items.* Initials of person completing assessment: _____

Suspected Adrenal Crisis Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

A patient with primary adrenal failure who is experiencing clinical signs of an adrenal crisis.

Conditions

	hydrocortisone
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Paramedics are presented with a vial of hydrocortisone for the identified patient **AND** Age-related hypoglycemia **OR** GI symptoms (vomiting, diarrhea, abdominal pain) **OR** Syncope **OR** Temperature ≥38C or suspected/history of fever **OR** Altered level of awareness **OR** Age-related tachycardia **OR** Age-related hypotension

Contraindications

hydrocortisone
Allergy or sensitivity to hydrocortisone

Treatment

Consider hydrocortisone	
	Route
	IM/IV/IO/CVAD
Dose	2 mg/kg
Max. single dose	100 mg
Dosing interval	N/A
Max. # of doses	1

***Dose should be rounded to the nearest 10 mg**

Clinical Considerations

N/A

Analgesia Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Pain

Conditions

acetaminophen	
Age	≥ 12 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

ibuprofen	
Age	≥ 12 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

ketorolac	
Age	≥ 12 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	Normotension
Other	N/A

morphine	
Age	≥ 1 year
LOA	Unaltered
HR	N/A
RR	N/A
SBP	Normotension
Other	N/A

fentaNYL	
Age	≥ 1 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	Normotension
Other	N/A

Contraindications

acetaminophen
Acetaminophen use within previous 4 hours
Allergy or sensitivity to acetaminophen
Hx of liver disease
Active vomiting
Unable to tolerate oral medication
Suspected ischemic chest pain

ibuprofen
NSAID use within previous 6 hours
Allergy or sensitivity to ASA or NSAIDs
Patient on anticoagulation therapy
Current active bleeding
Hx of peptic ulcer disease or GI bleed
Pregnant
If asthmatic, no prior use of ASA or other NSAIDs
CVA or TBI in the previous 24 hours
Known renal impairment
Active vomiting
Unable to tolerate oral medication
Suspected Ischemic chest pain

Contraindications continued

ketorolac
NSAID use within previous 6 hours
Allergy or sensitivity to ASA or NSAIDs
Patient on anticoagulation therapy
Current active bleeding
Hx of peptic ulcer disease or GI bleed
Pregnant
If asthmatic, no prior use of ASA or other NSAIDs
CVA or TBI in the previous 24 hours
Known renal impairment
Suspected ischemic chest pain

morphine
Allergy or sensitivity to morphine
Treatment of headache
Treatment of chronic pain
SBP drops by one-third or more of its initial value after morphine is administered
Suspected ischemic chest pain (refer to Cardiac Ischemia Medical Directive for suspected cardiac ischemia)
Active labour

fentaNYL
Allergy or sensitivity to fentaNYL
Treatment of headache
Treatment of chronic pain
SBP drops by one-third or more of its initial value after fentaNYL is administered
Suspected ischemic chest pain
Active labour

Treatment

Consider acetaminophen		
	Age ≥ 12 years to < 18 years	**Age** ≥ 18 years
Route	PO	PO
Dose	500-650 mg	960-1,000 mg
Max. single dose	650 mg	1,000 mg
Dosing interval	N/A	N/A
Max. # of doses	1	1

Consider ibuprofen	
	Age ≥ 12 years
Route	PO
Dose	400 mg
Max. single dose	400 mg
Dosing interval	N/A
Max. # of doses	1

Consider ketorolac	
	Age ≥ 12 years
Route	IM/IV
Dose	10-15 mg
Max. single dose	15 mg
Dosing interval	N/A
Max. # of doses	1

Consider fentaNYL (if available and authorized)		
	Age	**Age**
	≥ 1 year to < 18 years	≥ 18 years
Route	IV/IN	IV/IN
Dose	up to 1 mcg/kg	25 -75 mcg
Max. single dose	75 mcg	75 mcg
Dosing interval	5 min	5 min
Max. # of doses	N/A	N/A
Max cumulative dose	200 mcg	200 mcg

Consider morphine		
	Age	**Age**
	≥ 1 year to < 18 years	≥ 18 years
Route	IV/SC	IV/SC
Dose	0.05-0.1 mg/kg	2 -10 mg
Max. single dose	5 mg	10 mg
Dosing interval	15 min	15 min
Max. # of doses	N/A	N/A
Max. cumulative dose	10 mg	20 mg

Mandatory Provincial Patch Point

Patch to BHP for authorization and dosage verification before administering morphine or fentaNYL for children < 12 years old.

Clinical Considerations

Whenever possible, consider co-administration of acetaminophen and ibuprofen.

Suspected renal colic patients should routinely be considered for NSAIDs, either ibuprofen or ketorolac, **and** morphine or fentaNYL.

Exercise caution when using narcotics in opioid naïve patients and patients ≥ 65 years old as they may be more sensitive to dosages.

When higher doses of morphine (5-10 mg) or fentaNYL (50-75 mcg) are given intravenously, consider administering medication in small aliquots q 3 minutes until desired effect or max. single dose is reached to avoid nausea and vomiting.

fentaNYL should not be used in combination with morphine unless authorized by BHP.

The maximum volume of fentaNYL that may be administered IN is 1 mL per nare.

Combative Patient Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Combative **OR** violent or agitated behavior that requires sedation for patient safety.

Conditions

midazolam	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

ketamine	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected excited delirium / severe violent psychosis

Contraindications

midazolam
Allergy or sensitivity to midazolam

ketamine
Allergy or sensitivity to ketamine

Treatment

Consider midazolam	
	Age
	≥ 18 years
Route	IV/IM/IN
Dose	Up to 0.1 mg/kg
Max. single dose	5 mg
Dosing interval	5 min
Max. total dose	10 mg
Max. # of doses	N/A

Consider ketamine		
	Age	**Age**
	≥ 18 years to < 65 years	≥ 65 years
Route	IM	IM
Dose	5 mg/kg	3 mg/kg
Max. single dose	500 mg	300 mg
Dosing interval	N/A	N/A
Max. # of doses	1	1

Clinical Considerations

Reversible causes of combative, violent or agitated behaviors (e.g. hypoglycemia, hypoxia, hypovolemia) should be considered and treated (if possible) prior to treating with midazolam or ketamine.

Paramedics can administer a lower weight base dose (e.g. 0.05 mg/kg) of midazolam based on clinical judgment taking into consideration such as but not limited to, patient age, and degree of combativeness, and the level of suspicion of hypotension or hypoxia when unable to obtain vital signs.

Do not co-administer midazolam and ketamine unless direction received from BHP.

Consider quantitative $EtCO_2$ monitoring once the patient has been sedated.

If ketamine emergence reaction develops, a BHP patch is required if further sedation orders are required

Nausea/Vomiting Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Nausea **OR** vomiting.

Conditions

ondansetron	
Age	N/A
Weight	≥ 25 kg
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

dimenhyDRINATE	
Age	< 65 years
Weight	≥ 25 kg
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

ondansetron
Allergy to ondansetron
Prolonged QT syndrome (known to patient)
Apomorphine use

dimenhyDRINATE
Allergy or sensitivity to dimenhyDRINATE or other antihistamines
Overdose on antihistamines or anticholinergics or tricyclic antidepressants
Co-administration of diphenhydrAMINE

Treatment

Consider ondansetron	
	Weight
	≥ 25 kg
	Route
	PO
Dose	4 mg
Max. single dose	4 mg
Dosing interval	N/A
Max. # of doses	1

Consider dimenhyDRINATE		
	Weight	**Weight**
	≥25 kg to < 50 kg	≥ 50 kg
	Route	**Route**
	IV/IM	IV/IM
Dose	25 mg	50 mg
Max. single dose	25 mg	50 mg
Dosing interval	N/A	N/A
Max. # of doses	1	1

Clinical Considerations

Prior to IV administration, dilute dimenhyDRINATE (concentration of 50 mg/1 ml) 1:9 with Normal Saline or D5W. If administered IM do not dilute

If a patient has received Ondansetron and has no relief of their nausea & vomiting symptoms after 30 minutes, dimenhyDRINATE may be considered (or vise versa).

dimenhyDRINATE can be used in patients ≥ 65 if ondansetron is not available.

Home Dialysis Emergency Disconnect Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Patient receiving home dialysis (hemo or peritoneal) and connected to dialysis machine and requires transport to the closest appropriate receiving facility;

AND

Patient is unable to disconnect;

AND

There is no family member of caregiver who is available and knowledgeable in dialysis disconnect.

Conditions

Home Dialysis Emergency Disconnect	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

Home Dialysis Emergency Disconnect
N/A

Treatment

Consider Home Dialysis Emergency Disconnect

Clinical Considerations

Generally, an emergency disconnect kit with materials and instructions can be found hanging from the dialysis machine or nearby on the wall.

Ensure both the patient side and machine side of the connection are clamped before disconnecting and attaching end caps.

Emergency Childbirth Medical Directive

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Pregnant patient experiencing labour; **OR**

Post-partum patient immediately following delivery and/or placenta.

Conditions

Delivery	
Age	Childbearing years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Second stage labour **AND/OR** Imminent birth **AND/OR** Shoulder Dystocia **AND/OR** Breech Delivery **AND/OR** Prolapsed Cord

Umbilical Cord Management	
Age	Childbearing years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Cord complications **OR** if neonatal or maternal resuscitation is required **OR** Due to transport considerations

External Uterine Massage	
Age	Childbearing years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Post-placental delivery

oxytocin	
Age	Childbearing years
LOA	N/A
HR	N/A
RR	N/A
SBP	< 160 mmHg
Other	Postpartum delivery **AND/OR** Placental delivery

Contraindications

Delivery
N/A

Umbilical Cord Management
N/A

External Uterine Massage
Placenta not delivered

oxytocin
Allergy or sensitivity to oxytocin
Undelivered fetus
Suspected or known pre-eclampsia with current pregnancy
Eclampsia (seizures) with current pregnancy
≥4 hours post placenta delivery

Treatment

Consider delivery

Position the patient and deliver neonate.

Consider shoulder dystocia delivery

Perform ALARM twice on scene. If successful; deliver neonate. If unsuccessful; transport to closest appropriate facility.

Consider breech delivery

HANDS OFF the breech. Allow neonate to deliver to umbilicus; consider carefully releasing the legs & arms as they are delivered; otherwise hands off.

Once hairline is visible **AND/OR** 3 mins has passed since umbilicus was visualized attempt the Mauriceau Smellie-Veit maneuver.

If successful; deliver neonate. If unsuccessful; transport to closest appropriate facility.

Consider prolapsed cord delivery

If a cord prolapse is present, the fetal part should be elevated to relieve pressure on the cord. Assist the patient into a knee-chest position or exaggerated Sims position, and insert gloved fingers/hand into the vagina to apply manual digital pressure to the presenting part which is maintained until transfer of care in hospital.

Consider umbilical cord management

If a nuchal cord is present and loose, slip cord over the neonate's head. Only if a nuchal cord is tight and cannot be slipped over the neonate's head, clamp and cut the cord, encourage rapid delivery.

Following delivery of the neonate, the cord should be clamped and cut immediately if neonatal or maternal resuscitation is required. Otherwise, after pulsations have ceased (approximately 2-3 minutes), clamp the cord in two places and cut the cord.

Consider external uterine massage

Post placental delivery

Consider oxytocin

	Route
	IM
Dose	10 units
Max. single dose	10 units
Dosing Interval	N/A
Max. # of doses	1

Clinical Considerations

If the patient presents with limb-presentation, do not attempt to push the limb back into the vagina; discourage the patient from pushing, cover the limb using a dry sheet to maintain warmth, and initiate transport as per the *Load and Go Patient Standard* of the BLS PCS.

If labour is failing to progress, discourage the patient from pushing or bearing down during contractions.

If delivery has not occurred at scene within approximately ten minutes of initial assessment, consider transport in conjunction with the following:

a. Patient assessment findings:
    i. Lack of progression of labour;
    ii. Multiple births expected;
    iii. Neonate presents face up;
    iv. Pre-eclampsia;
    v. Presence of vaginal hemorrhage;
    vi. Premature labour;
    vii. Primip;
b. Distance to the closest appropriate receiving facility.

When the placenta is delivered, inspect it for wholeness, place in a plastic bag from the OBS kit, label it with the maternal patient's name and time of delivery, and transport it with the maternal or neonatal patient. Delivery of the placenta should not delay transport considerations/initiation.

Section 3 – PCP Auxiliary Medical Directives

3

Continuous Positive Airway Pressure (CPAP) Medical Directive – AUXILIARY

A Primary Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Severe respiratory distress;

AND

Signs and /or symptoms of acute pulmonary edema or COPD.

Conditions

	CPAP
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	Tachypnea
SBP	Normotension
Other	SpO_2 <90% or accessory muscle use

Contraindications

CPAP
Asthma exacerbation
Suspected pneumothorax
Unprotected or unstable airway
Major trauma or burns to the head or torso
Tracheostomy
Inability to sit upright
Unable to cooperate

Treatment

Consider CPAP		
Initial Setting	5 cm H_2O	Or equivalent flow rate of device as per RBHP direction
Titration increment	2.5 cm H_2O	Or equivalent flow rate of device as per RBHP direction
Titration interval	5 min	
Max. setting	15 cm H_2O	Or equivalent flow rate of device as per RBHP direction

Consider increasing FiO_2 (if available)	
Initial FiO_2	50-100%
FiO_2 increment (if available on device)	SpO_2 < 92% despite treatment and/or 10 cm H_2O pressure or equivalent flow rate of device as per RBHP direction
Max. FiO_2	100%

Confirm CPAP pressure by manometer (if available)

Clinical Considerations

N/A

Cardiogenic Shock Medical Directive – AUXILIARY

A Primary Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized for PCP Autonomous IV.

Indications

STEMI-positive 12-lead ECG;

AND

Cardiogenic shock.

Conditions

0.9% NaCl Fluid Bolus	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	Hypotension
Other	Chest auscultation is clear

Contraindications

0.9% NaCl Fluid Bolus
Fluid overload
SBP ≥ 90 mmHg

Treatment

Consider 0.9% NaCl fluid bolus	
	Age
	≥ 18 years
	Route
	IV
Infusion	10 ml/kg
Infusion interval	N/A
Reassess every	250 ml
Max. volume	1,000 ml

Clinical Considerations

N/A

Intravenous and Fluid Therapy Medical Directive - AUXILIARY

A Primary Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized for PCP Autonomous IV.

Indications

Actual or potential need for intravenous medication **OR** fluid therapy.

Conditions

IV Cannulation	
Age	≥ 2 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

0.9% NaCl Fluid Bolus	
Age	≥ 2 years
LOA	N/A
HR	N/A
RR	N/A
SBP	Hypotension
Other	N/A

Contraindications

IV Cannulation
Suspected fracture proximal to the access site

0.9% NaCl Fluid Bolus
Fluid overload

`Treatment

Consider IV cannulation

Consider 0.9% NaCl maintenance infusion

	Age ≥ 2 years to < 12 years	**Age** ≥ 12 years
	Route IV	**Route** IV
Infusion	15 ml/hr	30-60 ml/hr
Infusion interval	N/A	N/A
Reassess every	N/A	N/A
Max. volume	N/A	N/A

Mandatory Provincial Patch Point

Patch to BHP for authorization to administer 0.9% NaCl fluid bolus to hypotensive patients ≥2 years to <12 years with suspected Diabetic Ketoacidosis (DKA)

Consider 0.9% NaCl fluid bolus		
	Age ≥ 2 years to < 12 years	**Age** ≥ 12 years
	Route IV	**Route** IV
Infusion	20 ml/kg	20 ml/kg
Infusion interval	N/A	N/A
Reassess every	100 ml	250 ml
Max. volume*	2,000 ml	2,000 ml

***The maximum volume of NaCl is lower for patients in cardiogenic shock and return of spontaneous circulation.**

Clinical Considerations

"PCP Assist IV" authorizes a PCP to cannulate a peripheral IV at the request and under the direct supervision of an ACP. The patient must require a peripheral IV in accordance with the indications listed in this Medical Directive. PCPs authorized for PCP Assist IV are not authorized to administer IV fluid or medication therapy.

Microdrips and/or volume control administration sets should be considered when IV access is indicated for patients <12 years of age.

An intravenous fluid bolus may be considered for a patient who does not meet trauma TOR criteria, where it does not delay transport and should not be prioritized over management of other reversible causes.

Seizure Medical Directive – AUXILIARY

A Primary Care Paramedic may provide the treatment prescribed in this Auxiliary Medical Directive if authorized.

Considerations for Treat and Discharge (if authorized)

All of the following criteria must be met:

- ☐ the patient is ≥18 AND <65 years old;
- ☐ patient must have a history of epilepsy;
- ☐ the patient is taking their anticonvulsant medication as prescribed;
- ☐ the patient must have only had a single seizure episode in the past 24 hours;
- ☐ the seizure pattern and duration must be similar to past seizures;
- ☐ the patient has returned to their normal level of consciousness;
- ☐ a complete set of vital signs including temperature are within expected normal ranges;

AND

- ☐ the seizure must not be related to hypoglycemia, alcohol or substance abuse or withdrawal;
- ☐ the patient must not have received midazolam by paramedics;
- ☐ the patient did not injure themselves during seizure activity;
- ☐ the patient must not have a fever, preceding illness or recently started a new medication, and;
- ☐ the patient is not pregnant.

In addition to the above criteria, if all of the following requirements have been met, the patient can be discharged by paramedics:

- a responsible adult agrees to remain with the patient for the next 4 hours;
- all of the patient or substitute decision makers questions were answered and a care plan was developed;
- the patient or substitute decision maker has been advised to follow up with their primary health care team or provider;
- clear instructions to call 911 were provided should symptoms redevelop;
- patient or substitute decision maker has the ability to access 911 should symptoms redevelop, and
- patient or substitute decision maker consents to the discharge.

Clinical Considerations (Treat and Discharge)

Patch to BHP for consultation if you are unclear if the patient meets all of the discharge criteria.

Assessment of Patients with Possible COVID-19 Medical Directive – AUXILIARY

A Primary Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Confirmed COVID-19 or suspected COVID-19 with mild acute respiratory illness characterized by a combination of 2 or more of the following: fever, new onset of cough, worsening chronic cough, shortness of breath or difficulty breathing, sore throat, runny nose/nasal congestion (without any known cause).

AND

The crisis is straining the resources of the host community

Conditions

Patient disposition	
Age	≥ 18 years to < 65 years
LOA	Unaltered
HR	< 110 bpm
RR	< 22 breaths/min
SBP	Normotension
Other	CTAS 3, 4 or 5 SpO_2 ≥ 94%. If temperature ≥ 38° C, does not appear septic/unwell

Nasopharyngeal OR nasal OR pharyngeal swab	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Patient is being released from care **AND** Meets COVID-19 testing criteria OR as requested by local Public Health

Contraindications

Patient disposition
Patient and/or substitute decision maker (SDM) cannot demonstrate decision-making capacity based on the Aid to Capacity Evaluation Tool
Pregnancy

Nasopharyngeal OR nasal OR pharyngeal swab
Recent significant facial trauma (all)
Current epistaxis **OR** significant abnormality of the nasal anatomy (nasopharyngeal or nasal swab)
Significant abnormality of the oral anatomy (pharyngeal swab)

Treatment

Mandatory Provincial Patch Point
Patch to BHP for authorization to consider release from care

Consider patient disposition* (if authorized)		
	Transport to closest most appropriate emergency department	**Consider release from care (following BHP patch)**
CTAS	1 & 2 3 with comorbidity or immunocompromise	3 with mild or no respiratory distress (without comorbidity/immunocompromise) 4 & 5 without immunocompromise

***Assess for safety to remain at home including clinical criteria above, and the following: patient is unaltered, the patient can self-isolate, the patient has access to food, phone, and other necessities, and appropriate caregivers are available (if needed).**

Prior to a release from care, the patient and/or SDM must be provided with contact information for their Local Public Health Unit, education on self-isolation and symptom management, and information for accessing assessment centres. Paramedics must document these instructions and patient and/or SDM consent to the plan of care in the remarks section of the Ambulance Call Report. Advise the patient that if the problem persists or worsens they should seek further medical attention.

Consider obtaining nasopharyngeal OR nasal OR pharyngeal swab (if available and authorized)
If swab obtained, complete the lab requisition and transport the specimen as per local arrangement.

Clinical Considerations

Base Hospital Physician Patch:
When a patch is made to the BHP, the Paramedic will provide the following: patient's COVID-19 screening result, history of illness and symptoms, all past medical history, vital signs, and assessment findings, in addition to patient and/or SDM's wishes, and follow-up plans (if known).

Immunocompromised definition:
Patient or caregiver states immunocompromised, cancer treatment within past 6 weeks, HIV/AIDS, organ transplant patient, substance-use disorder, and any immunosuppressive medications.

Comorbidity definition:
Hypertension, cardiovascular disease, cerebrovascular disease, diabetes, chronic lung disease, chronic kidney disease, immunocompromised.

Mild respiratory distress definition:
Patient may report dyspnea on exertion, but there is mild or no increased work of breathing, patient able to speak in sentences, and RR < 22 breaths/min **AND** SpO_2 ≥ 94%.

Minor Abrasions Medical Directive – AUXILIARY-SPECIAL EVENT

A Primary Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Minor abrasions;

AND

A mass gathering that could potentially strain the resources of the host community

AND

The special event directive has been authorized for use by the Medical Director for a specific mass gathering.

Conditions

	Topical antibiotic
Age	N/A
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

Topical antibiotic
Allergy or sensitivity to any of the components of the topical antibiotic

Treatment

Consider topical antibiotic ointment

Consider release from care

Clinical Considerations

Advise patient that if the problem persists or worsens that they should seek further medical attention.

Minor Allergic Reaction Medical Directive – AUXILIARY - SPECIAL EVENT

A Primary Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Signs consistent with a minor allergic reaction;

AND

A mass gathering that could potentially strain the resources of the host community

AND

The special event directive has been authorized for use by the Medical Director for a specific mass gathering.

Conditions

	diphenhydrAMINE
Age	≥ 18 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	Normotension
Other	N/A

Contraindications

diphenhydrAMINE
Allergy or sensitivity to diphenhydramine
Antihistamine or sedative use in previous 4 hours
Signs or symptoms of moderate to severe allergic reaction
Signs or symptoms of intoxication
Wheezing

Treatment

Consider diphenhydrAMINE	
	Route
	PO
Dose	50 mg
Max. single dose	50 mg
Dosing interval	N/A
Max. # of doses	1

Consider release from care

Clinical Considerations

Advise patient that if the problem persists or worsens that they should seek further medical attention.

Musculoskeletal Pain Medical Directive – AUXILIARY - SPECIAL EVENT

A Primary Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Minor musculoskeletal pain;

AND

A mass gathering that could potentially strain the resources of the host community

AND

The special event directive has been authorized for use by the Medical Director for a specific mass gathering.

Conditions

	acetaminophen
Age	≥ 18 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

acetaminophen
Acetaminophen use within previous 4 hours
Allergy or sensitivity to acetaminophen
Signs or symptoms of intoxication

Treatment

Consider acetaminophen	
	Route
	PO
Dose	960-1000 mg
Max. single dose	960-1000 mg
Dosing interval	N/A
Max. # of doses	1

Consider release from care

Clinical Considerations

Advise patient that if the problem persists or worsens that they should seek further medical attention.

Headache Medical Directive – AUXILIARY - SPECIAL EVENT

A Primary Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Uncomplicated headache conforming to the patient's usual pattern;

AND

A mass gathering that could potentially strain the resources of the host community

AND

The special event directive has been authorized for use by the Medical Director for a specific mass gathering.

Conditions

	acetaminophen
Age	≥ 18 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

acetaminophen
Acetaminophen use within previous 4 hours
Allergy or sensitivity to acetaminophen
Signs or symptoms of intoxication

Treatment

Consider acetaminophen	
	Route
	PO
Dose	960-1000 mg
Max. single dose	960-1000 mg
Dosing interval	N/A
Max. # of doses	1

Consider release from care

Clinical Considerations

Advise patient that if the problem persists or worsens that they should seek further medical attention.

Cyanide Exposure Medical Directive – AUXILIARY CHEMICAL EXPOSURE

A Primary Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Suspected exposure to cyanide

AND

Cardiac arrest; **OR**

Altered level of awareness; **OR**

Hypotension.

Conditions

sodium thiosulfate 25%	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

hydroxocobalamin	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

sodium thiosulfate 25%	hydroxocobalamin
Allergy or sensitivity to Sodium Thiosulfate 25%	Allergy or sensitivity to Hydroxocobalamin

Treatment

Consider sodium thiosulfate 25%		
	Age < 18 years	**Age** ≥ 18 years
	Route IV	**Route** IV
Dose	400 mg/kg or 1.6 mL/kg over 15 min	12.5 g (50 ml of 25% solution) over 15 min
Max. single dose	12.5 g (50 ml of 25% solution)	12.5 g (50 ml of 25% solution)
Dosing interval	N/A	N/A
Max. # of doses	1	1

Mandatory Provincial Patch Point
Patch to BHP for authorization to proceed with the administration of hydroxocobalamin in cases of "suspected" cyanide toxicity.

Consider hydroxocobalamin (if not using sodium thiosulfate 25%)		
	Age < 18 years	**Age** ≥ 18 years
	Route IV	**Route** IV
Dose	70 mg/kg over 30 min.	5 g over 15 - 30 min.
Max. single dose	5 g	5 g
Dosing interval	N/A	N/A
Max. # of doses	1	1

Clinical Considerations

Hydroxocobalamin must be reconstituted with 200 ml normal saline prior to use.

IV condition applies only to PCPs authorized for PCP Autonomous IV.

Hydroxocobalamin Dosing Chart

Weight (kg)	Dose	Concentration	Volume of Administration
5	350 mg	25 mg/ml	14 ml
10	700 mg	25 mg/ml	28 ml
15	1050 mg	25 mg/ml	42 ml
20	1400 mg	25 mg/ml	56 ml
25	1750 mg	25 mg/ml	70 ml
30	2100 mg	25 mg/ml	84 ml
35	2450 mg	25 mg/ml	98 ml
40	2800 mg	25 mg/ml	112 ml
≥ 41	5g	25 mg/ml	200 ml

Hydrofluoric (HF) Acid Exposure Medical Directive – AUXILIARY CHEMICAL EXPOSURE

A Primary Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Exposure to vapour and/or liquid hydrofluoric acid (HF);

AND

Exhibits signs and symptoms of HF acid toxicity.

Conditions

calcium gluconate	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Topical anaesthetic eye drops	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

calcium gluconate	Topical anaesthetic eye drops
Allergy or sensitivity to Calcium Gluconate	Allergy or sensitivity to local anaesthetics

Treatment

Consider calcium gluconate		
	Inhalation exposure	**Skin exposure**
	Concentration	**Concentration**
	10% solution	2.5% gel
	Route	**Route**
	NEB	TOP
Dose	100 mg	N/A
Max Single Dose	100 mg	N/A
Dosing Interval	N/A	Immediate
Max # of doses	1	N/A

Consider topical anaesthetic eye drops	
	Eye exposure
	Route
	TOP
Dose	2 gtts/eye
Max Single Dose	2 gtts/eye
Dosing Interval	10 min
Max # of doses	N/A

Clinical Considerations

For skin contact, ensure thorough irrigation prior to treatment.

For eye exposure remove patient`s contact lenses, if applicable, prior to initiating treatment. Use anaesthetic eye drops for comfort and then irrigate eyes with normal saline for at least 15 minutes.

Administration of topical anesthetic eye drops should not delay the initiation of eye irrigation

Nebulizers typically require 2 to 3 mls to ensure appropriate medication administration.

Adult Nerve Agent Exposure Medical Directive – AUXILIARY CHEMICAL EXPOSURE

A Primary Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Exposure to a known or suspected nerve agent;

AND

Signs and symptoms of a cholinergic crisis.

Conditions

atropine	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea

pralidoxime	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea

diazePAM	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea
midazolam	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea

Contraindications

atropine
Allergy or sensitivity to atropine

pralidoxime
Allergy or sensitivity to pralidoxime

diazepam
Allergy or sensitivity to diazepam

midazolam
Allergy or sensitivity to midazolam
Use / Availability of diazePAM

Treatment

Consider atropine		
	Moderate Exposure	**Severe Exposure**
	Route	**Route**
	IM	IM
Initial Dose	2 mg	6 mg
Additional doses	2 mg	6mg
Dosing interval	5 min.	5 min.
Max # of doses	N/A	N/A

Consider pralidoxime		
	Moderate Exposure	**Severe Exposure**
	Route	**Route**
	IM	IM
Initial Dose	600 mg	1,800 mg
Additional doses	600 mg	1,800 mg
Dosing interval	15 min.	60 min.
Max # of doses	3	2

Consider diazePAM	
	Moderate Exposure
	Route
	IM
Dose	10 mg
Dosing interval	N/A
Max # of doses	1

Consider midazolam (if not using diazePAM)	
	Moderate Exposure
	Route
	IM
Dose	10 mg
Dosing interval	5 min.
Max # of doses	2

Clinical Considerations

Atropine should be administered prior to airway interventions if secretions are copious.

Pralidoxime should be given as soon as possible after the administration of atropine.

Subsequent doses of atropine are intended for patients showing signs of bronchial secretions and may be repeated as indicated until airway secretions are controlled.

Decontamination procedures must be integrated with antidote administration.

Pediatric Nerve Agent Exposure Medical Directive – AUXILIARY CHEMICAL EXPOSURE

A Primary Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Exposure to a known or suspected nerve agent.'

AND

Signs and symptoms of a cholinergic crisis

Conditions

atropine	
Age	< 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure. **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea.

pralidoxime	
Age	< 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure. **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea.

diazePAM	
Age	< 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure. **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea.

midazolam	
Age	< 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure. **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea.

Contraindications

atropine
Allergy or sensitivity to atropine

pralidoxime
Allergy or sensitivity to pralidoxime

diazePAM
Allergy or sensitivity to diazepam

midazolam
Allergy or sensitivity to midazolam
Use / availability of diazePAM

Treatment

Consider atropine	Moderate and Severe Exposure	Moderate and Severe Exposure	Moderate Exposure	Severe Exposure
	Weight < 10 kg	**Weight** ≥ 10 kg to < 40 kg	**Weight** ≥ 40 kg	**Weight** ≥ 40 kg
	Route IM	**Route** IM	**Route** IM	**Route** IM
Dose	0.5 mg	1 mg	2 mg	6 mg
Max. single dose	0.5 mg	1 mg	2 mg	6 mg
Dosing interval	5 min.	5 min.	5 min.	5 min.
Max. # of doses	N/A	N/A	N/A	N/A

Consider pralidoxime	Moderate Exposure	Severe Exposure	Moderate Exposure	Severe Exposure
	Weight < 40 kg	**Weight** < 40 kg	**Weight** ≥ 40 kg	**Weight** ≥ 40 kg
	Route IM	**Route** IM	**Route** IM	**Route** IM
Dose	15 mg/kg	45 mg/kg	600 mg	1800 mg
Max. single dose	600 mg	600 mg	600 mg	1800 mg
Dosing interval	15 min.	60 min.	15 min.	60 min.
Max. # of doses	3	2	3	2

Consider diazePAM		
	Weight < 50 kg	**Weight** ≥ 50 kg
	Route IM	**Route** IM
Dose	0.2 mg/kg	10 mg
Max. single dose	10 mg	10 mg
Dosing interval	N/A	N/A
Max. # of doses	1	1

Consider midazolam (if not using diazePAM)		
	Weight < 50 kg	**Weight** ≥ 50 kg
	Route IM	**Route** IM
Dose	0.2 mg/kg	10 mg
Max. single dose	10 mg	10 mg
Dosing interval	5 min.	5 min.
Max. # of doses	2	2

Clinical Considerations

Consider using autoinjector for patients who are <50 kg with severe symptoms if there is any perceived delay to treatment.

Atropine should be administered prior to airway interventions if secretions are copious.

Pralidoxime should be given as soon as possible after the administration of atropine.

Subsequent doses of atropine are intended for patients showing signs of bronchial secretions and may be repeated as indicated until airway secretions are controlled.

Decontamination procedures must be integrated with antidote administration.

Symptomatic Riot Agent Exposure Medical Directive – AUXILIARY CHEMICAL EXPOSURE

A Primary Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Known or suspected exposure to a riot agent with signs and symptoms of a riot agent exposure.

Conditions

Topical Anaesthetic Eye Drops	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

Topical Anaesthetic Eye Drops
Allergy or sensitivity to local anaesthetics

Treatment

Consider topical anaesthetic eye drops	
	Route
	TOP
Dose	2 gtts/eye
Max. single dose	2 gtts/eye
Dosing interval	10 min
Max. # of doses	N/A

Clinical Considerations

For skin or mucous membrane contact, ensure thorough irrigation.

For eye exposure, remove patient`s contact lenses if applicable prior to initiating treatment. Use anaesthetic eye drops for comfort and then irrigate eyes with normal saline for at least 15 minutes.

Section 4 – ACP Auxiliary Medical Directives

4

Nasotracheal Intubation Medical Directive – AUXILIARY

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Need for ventilatory assistance or airway control;

AND

Other airway management is ineffective.

Conditions

xylometazoline	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

lidocaine spray	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Gag reflex

Nasotracheal Intubation	
Age	≥ 8 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Spontaneous Breathing

Contraindications

xylometazoline
Allergy or sensitivity to xylometazoline

lidocaine spray
Allergy or sensitivity to lidocaine spray
Unresponsive patient

Nasotracheal Intubation
Age <50 years **AND** current episode of asthma exacerbation **AND** not in or near cardiac arrest.
Suspected basal skull fracture or mid-face fracture
Uncontrolled epistaxis
Anticoagulant therapy (excluding ASA)
Bleeding disorders

Treatment

Consider xylometazoline 0.1% spray	
	Route
	TOP
Dose	2 sprays/nare
Max. single dose	2 sprays/nare
Dosing interval	N/A
Max. # of doses	1

Consider topical lidocaine spray (to the nares and/or hypopharynx)	
	Route
	TOP
Dose	10 mg/spray
Max. single dose	5 mg/kg
Dosing interval	N/A
Max. # of doses	20 sprays

Consider nasotracheal intubation
The maximum number of intubation attempts is 2.

Confirm nasotracheal tube placement	
Method	**Method**
Primary	*Secondary*
$ETCO_2$ (Waveform capnography)	$ETCO_2$ (Non-waveform device)
	Auscultation
	Esophageal detection device
	Chest rise

Clinical Considerations

A nasotracheal intubation attempt is defined as insertion of the nasotracheal tube into a nare.

Confirmation of nasotracheal placement must use $ETCO_2$ (Waveform capnography). If wave-form capnography not available or not working, then at least 2 secondary methods must be used.

ETT placement must be reconfirmed immediately after every patient movement

.

Cricothyrotomy Medical Directive – AUXILIARY

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Need for advanced airway management;

AND

Intubation AND supraglottic airway insertion unsuccessful or contraindicated;

AND

Unable to ventilate.

Conditions

	Cricothyrotomy
Age	≥ 12 years
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

Cricothyrotomy
Suspected fractured larynx
Inability to landmark

Treatment

Consider cricothyrotomy

Consider cricothyrotomy tube placement	
Method	**Method**
Primary	*Secondary*
$ETCO_2$ (Waveform capnography)	$ETCO_2$ (Non-waveform device)
	Auscultation
	Chest rise

Clinical Considerations

Confirmation of cricothyrotomy must use $ETCO_2$ (Waveform capnography). If waveform capnography is not available or not working, then at least 2 secondary methods must be used. Additional secondary Cricothyrotomy tube placement confirmation devices may be authorized by the local medical director.

Cricothyrotomy tube placement must be reconfirmed immediately after every patient movement.

Continuous Positive Airway Pressure (CPAP) Medical Directive – AUXILIARY

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Severe respiratory distress;

AND

Signs and /or symptoms of acute pulmonary edema or COPD.

Conditions

	CPAP
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	Tachypnea
SBP	Normotension
Other	SpO_2 < 90% or accessory muscle use

Contraindications

CPAP
Asthma exacerbation
Suspected pneumothorax
Unprotected or unstable airway
Major trauma or burns to the head or torso
Tracheostomy
Inability to sit upright
Unable to cooperate

Treatment

Consider CPAP		
Initial Setting	5 cm H_2O	Or equivalent flow rate of device as per RBHP direction
Titration increment	2.5 cm H_2O	Or equivalent flow rate of device as per RBHP direction
Titration interval	5 min	
Max. setting	15 cm H_2O	Or equivalent flow rate of device as per RBHP direction

Consider increasing FiO_2 (if available)	
Initial FiO_2	50-100%
FiO_2 increment (if available on device)	SpO_2 <92% despite treatment and/or 10 cm H_2O pressure or equivalent flow rate of device as per RBHP direction
Max. FiO_2	100%

Confirm CPAP pressure by manometer (if available)

Clinical Considerations

N/A

Adult Intraosseous Medical Directive - AUXILIARY

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Actual or potential need for intravenous medication **OR** fluid therapy;

AND

IV access is unobtainable;

AND

Cardiac arrest or pre-arrest state.

Conditions

	IO
Age	≥ 12 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

IO
Fracture or crush injuries proximal to the access site. Suspected or known replacement / prostheses immediately proximal to the access site

Treatment

Consider IO access

Clinical Considerations

N/A

Procedural Sedation Medical Directive – AUXILIARY

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Post-intubation; **OR**

Transcutaneous pacing.

Conditions

fentaNYL	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	≥ 10/min*
SBP	Normotension
Other	N/A

midazolam	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	≥ 10/min*
SBP	Normotension
Other	N/A

***Non-intubated patients only**

Contraindications

fentaNYL
Allergy or sensitivity to fentaNYL

midazolam
Allergy or sensitivity to midazolam

Treatment

Consider fentaNYL	
	Route
	IV/IO/CVAD/IN
Dose	25-75 mcg
Max. single dose	75 mcg
Dosing interval	5 min
Max. total dose	150 mcg

Consider midazolam	
	Route
	IV/IO/CVAD/IN
Dose	Up to 0.1 mg/kg
Max. single dose	5 mg
Dosing interval	5 min
Max. total dose	10 mg

Clinical Considerations

Consider lower dose of medication in elderly and lighter weight individuals.

Consider quantitative EtCO2 monitoring once the patient has been sedated.

Assessment of Patients with Possible COVID-19 Medical Directive – AUXILIARY

An Advanced Care Paramedic may provide the treatment prescribed in this Medical Directive if authorized.

Indications

Confirmed COVID-19 or suspected COVID-19 with mild acute respiratory illness characterized by a combination of 2 or more of the following: fever, new onset of cough, worsening chronic cough, shortness of breath or difficulty breathing, sore throat, runny nose/nasal congestion (without any known cause).

AND

The crisis is straining the resources of the host community

Conditions

Patient disposition	
Age	≥ 18 years to < 65 years
LOA	unaltered
HR	< 110 bpm
RR	< 22 breaths/min
SBP	normotension
Other	CTAS 3, 4 or 5 SpO_2 ≥ 94%. If temperature ≥ 38° C, does not appear septic/unwell

Nasopharyngeal OR nasal OR pharyngeal swab	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Patient is being released from care **AND** Meets COVID-19 testing criteria OR as requested by local Public Health

Contraindications

Patient disposition
Patient and/or substitute decision maker (SDM) cannot demonstrate decision-making capacity based on the Aid to Capacity Evaluation Tool
Pregnancy

Nasopharyngeal OR nasal OR pharyngeal swab
Recent significant facial trauma (all)
Current epistaxis **OR** significant abnormality of the nasal anatomy (nasopharyngeal or nasal swab)
Significant abnormality of the oral anatomy (pharyngeal swab)

Treatment

Mandatory Provincial Patch Point
Patch to BHP for authorization to consider release from care

Consider patient disposition* (if authorized)		
	Transport to closest most appropriate emergency department	**Consider release from care (following BHP patch)**
CTAS	1 & 2 3 with comorbidity or immunocompromise	3 with mild or no respiratory distress (without comorbidity/immunocompromise) 4 & 5 without immunocompromise

***Assess for safety to remain at home including clinical criteria above, and the following: patient is unaltered, the patient can self-isolate, the patient has access to food, phone, and other necessities, and appropriate caregivers are available (if needed).**

Prior to a release from care, the patient and/or SDM must be provided with contact information for their Local Public Health Unit, education on self-isolation and symptom management, and information for accessing assessment centres. Paramedics must document these instructions and patient and/or SDM consent to the plan of care in the remarks section of the Ambulance Call Report. Advise the patient that if the problem persists or worsens they should seek further medical attention.

Consider obtaining nasopharyngeal OR nasal OR pharyngeal swab (if available and authorized)
If swab obtained, complete the lab requisition and transport the specimen as per local arrangement.

Clinical Considerations

Base Hospital Physician Patch:
When a patch is made to the BHP, the Paramedic will provide the following: patient's COVID-19 screening result, history of illness and symptoms, all past medical history, vital signs, and assessment findings, in addition to patient and/or SDM's wishes, and follow-up plans (if known).

Immunocompromised definition:
Patient or caregiver states immunocompromised, cancer treatment within past 6 weeks, HIV/AIDS, organ transplant patient, substance-use disorder, and any immunosuppressive medications.

Comorbidity definition:
Hypertension, cardiovascular disease, cerebrovascular disease, diabetes, chronic lung disease, chronic kidney disease, immunocompromised.

Mild respiratory distress definition:
Patient may report dyspnea on exertion, but there is mild or no increased work of breathing, patient able to speak in sentences, and RR < 22 breaths/min **AND** SpO_2 ≥ 94%.

Minor Abrasions Medical Directive – AUXILIARY-SPECIAL EVENT

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Minor abrasions;

AND

A mass gathering that could potentially strain the resources of the host community

AND

The special event directive has been authorized for use by the Medical Director for a specific mass gathering.

Conditions

	Topical antibiotic
Age	N/A
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

Topical antibiotic
Allergy or sensitivity to any of the components of the topical antibiotic

Treatment

Consider topical antibiotic ointment

Consider release from care

Clinical Considerations

Advise patient that if the problem persists or worsens that they should seek further medical attention.

Minor Allergic Reaction Medical Directive – AUXILIARY - SPECIAL EVENT

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Signs consistent with minor allergic reaction;

AND

A mass gathering that could potentially strain the resources of the host community

AND

The special event directive has been authorized for use by the Medical Director for a specific mass gathering.

Conditions

	diphenhydrAMINE
Age	≥ 18 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	Normotension
Other	N/A

Contraindications

diphenhydrAMINE
Allergy or sensitivity to diphenhydramine
Antihistamine or sedative use in previous 4 hours
Signs or symptoms of moderate to severe allergic reaction
Signs or symptoms of intoxication
Wheezing

Treatment

Consider diphenhydrAMINE	
	Route
	PO
Dose	50 mg
Max. single dose	50 mg
Dosing interval	N/A
Max. # of doses	1

Consider release from care

Clinical Considerations

Advise patient that if the problem persists or worsens that they should seek further medical attention.

Musculoskeletal Pain Medical Directive – AUXILIARY - SPECIAL EVENT

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Minor musculoskeletal pain;

AND

A mass gathering that could potentially strain the resources of the host community

AND

The special event directive has been authorized for use by the Medical Director for a specific mass gathering.

Conditions

	acetaminophen
Age	≥ 18 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

acetaminophen
Acetaminophen use within previous 4 hours
Allergy or sensitivity to acetaminophen
Signs or symptoms of intoxication

Treatment

Consider acetaminophen	
	Route
	PO
Dose	960-1000 mg
Max. single dose	960-1000 mg
Dosing interval	N/A
Max. # of doses	1

Consider release from care

Clinical Considerations

Advise patient that if the problem persists or worsens that they should seek further medical attention.

Headache Medical Directive – AUXILIARY - SPECIAL EVENT

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Uncomplicated headache conforming to the patient's usual pattern;

AND

A mass gathering that could potentially strain the resources of the host community

AND

The special event directive has been authorized for use by the Medical Director for a specific mass gathering.

Conditions

	acetaminophen
Age	≥ 18 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

acetaminophen
Acetaminophen use within previous 4 hours
Allergy or sensitivity to acetaminophen
Signs or symptoms of intoxication

Treatment

Consider acetaminophen	
	Route
	PO
Dose	960-1000 mg
Max. single dose	960-1000 mg
Dosing interval	N/A
Max. # of doses	1

Consider release from care

Clinical Considerations

Advise patient that if the problem persists or worsens that they should seek further medical attention.

Cyanide Exposure Medical Directive – AUXILIARY CHEMICAL EXPOSURE

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Suspected exposure to cyanide

AND

Cardiac arrest; **OR**

Altered level of awareness; **OR**

Hypotension.

Conditions

sodium thiosulfate 25%	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

hydroxocobalamin	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

sodium thiosulfate 25%	hydroxocobalamin
Allergy or sensitivity to Sodium Thiosulfate 25%	Allergy or sensitivity to Hydroxocobalamin

Treatment

Consider sodium thiosulfate 25%		
	Age < 18 years	**Age** ≥ 18 years
	Route IV/IO/CVAD	**Route** IV/IO/CVAD
Dose	400 mg/kg or 1.6 mL/kg over 15 min	12.5g (50 ml of 25% solution) over 15 min
Max. single dose	12.5g (50 ml of 25% solution)	12.5g (50 ml of 25% solution)
Dosing interval	N/A	N/A
Max. # of doses	1	1

Mandatory Provincial Patch Point
Patch to BHP for authorization to proceed with the administration of hydroxocobalamin in cases of "suspected" cyanide toxicity.

Consider hydroxocobalamin (if not using sodium thiosulfate 25%)		
	Age < 18 years	**Age** ≥ 18 years
	Route IV/IO/CVAD	**Route** IV/IO/CVAD
Dose	70 mg/kg over 30 min.	5 g over 15 - 30 min.
Max. single dose	5 g	5 g
Dosing interval	N/A	N/A
Max. # of doses	1	1

Clinical Considerations

Hydroxocobalamin must be reconstituted with 200 ml normal saline prior to use.

Hydroxocobalamin Dosing Chart

Weight (kg)	Dose	Concentration	Volume of Administration
5	350 mg	25 mg/ml	14 ml
10	700 mg	25 mg/ml	28 ml
15	1050 mg	25 mg/ml	42 ml
20	1400 mg	25 mg/ml	56 ml
25	1750 mg	25 mg/ml	70 ml
30	2100 mg	25 mg/ml	84 ml
35	2450 mg	25 mg/ml	98 ml
40	2800 mg	25 mg/ml	112 ml
≥ 41	5g	25 mg/ml	200 ml

Hydrofluoric (HF) Acid Exposure Medical Directive – AUXILIARY CHEMICAL EXPOSURE

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Exposure to vapour and/or liquid hydrofluoric acid (HF);

AND

Exhibits signs and symptoms of HF acid toxicity.

Conditions

calcium gluconate	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Topical Anaesthetic Eye Drops	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

calcium gluconate	Topical Anaesthetic Eye Drops
Allergy or sensitivity to calcium gluconate	Allergy or sensitivity to local anaesthetics

Treatment

Consider calcium gluconate		
	Inhalation exposure	**Skin exposure**
	Concentration	**Concentration**
	10% solution	2.5% gel
	Route	**Route**
	NEB	TOP
Dose	100 mg	N/A
Max Single Dose	100 mg	N/A
Dosing Interval	N/A	Immediate
Max # of doses	1	N/A

Consider topical anaesthetic eye drops	
	Eye exposure
	Route
	TOP
Dose	2 gtts/eye
Max Single Dose	2 gtts/eye
Dosing Interval	10 min
Max # of doses	N/A

Clinical Considerations

For skin contact, ensure thorough irrigation prior to treatment.

For eye exposure remove patient`s contact lenses, if applicable, prior to initiating treatment. Use anaesthetic eye drops for comfort and then irrigate eyes with normal saline for at least 15 minutes.

Administration of topical anesthetic eye drops should not delay the initiation of eye irrigation

Nebulizers typically require 2 to 3 mls to ensure appropriate medication administration.

Adult Nerve Agent Exposure Medical Directive – AUXILIARY CHEMICAL EXPOSURE

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Exposure to a known or suspected nerve agent;

AND

Signs and symptoms of a cholinergic crisis.

Conditions

atropine	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea

pralidoxime	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea

diazePAM	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea
midazolam	
Age	≥ 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea

Contraindications

atropine
Allergy or sensitivity to atropine

pralidoxime
Allergy or sensitivity to pralidoxime

diazePAM
Allergy or sensitivity to diazepam

midazolam
Allergy or sensitivity to midazolam
Use / Availability of diazePAM

Treatment

Consider atropine	Moderate Exposure	Severe Exposure
	Route	**Route**
	IM	IM
Initial Dose	2 mg	6 mg
Additional doses	2 mg	6 mg
Dosing interval	5 min.	5 min.
Max # of doses	N/A	N/A

Consider pralidoxime	Moderate Exposure	Severe Exposure
	Route	**Route**
	IM	IM
Initial Dose	600 mg	1,800 mg
Additional doses	600 mg	1,800 mg
Dosing interval	15 min.	60 min.
Max # of doses	3	2

Consider diazePAM	
	Moderate Exposure
	Route IM
Dose	10 mg
Dosing interval150 mgDosing interval	N/A
Max # of doses	1

Consider midazolam (if not using diazePAM)	
	Moderate Exposure
	Route IM
Dose	10 mg
Dosing interval	5 min.
Max # of doses	2

Clinical Considerations

Atropine should be administered prior to airway interventions if secretions are copious.

Pralidoxime should be given as soon as possible after the administration of atropine.

Subsequent doses of atropine are intended for patients showing signs of bronchial secretions and may be repeated as indicated until airway secretions are controlled.

Decontamination procedures must be integrated with antidote administration.

Pediatric Nerve Agent Exposure Medical Directive – AUXILIARY CHEMICAL EXPOSURE

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Exposure to a known or suspected nerve agent.

AND

Signs and symptoms of a cholinergic crisis

Conditions

atropine	
Age	< 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure. **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea.

pralidoxime	
Age	< 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure. **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea.

diazePAM	
Age	< 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure. **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea.

midazolam	
Age	< 18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis **Moderate Exposure** Any one of the following: vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath or any known liquid exposure. **Severe Exposure** Signs and symptoms of a moderate exposure and any one of the following: decreased LOA, paralysis, seizure or apnea.

Contraindications

atropine
Allergy or sensitivity to atropine

pralidoxime
Allergy or sensitivity to pralidoxime

diazePAM
Allergy or sensitivity to diazepam

midazolam
Allergy or sensitivity to midazolam
Use / availability of diazePAM

Treatment

Consider atropine	Moderate and Severe Exposure	Moderate and Severe Exposure	Moderate Exposure	Severe Exposure
	Weight < 10 kg	**Weight** ≥ 10 kg to < 40 kg	**Weight** ≥ 40 kg	**Weight** ≥ 40 kg
	Route IM	**Route** IM	**Route** IM	**Route** IM
Dose	0.5 mg	1 mg	2 mg	6 mg
Max. single dose	0.5 mg	1 mg	2 mg	6 mg
Dosing interval	5 min.	5 min.	5 min.	5 min.
Max. # of doses	N/A	N/A	N/A	N/A

Consider pralidoxime	Moderate Exposure	Severe Exposure	Moderate Exposure	Severe Exposure
	Weight < 40 kg	**Weight** < 40 kg	**Weight** ≥ 40 kg	**Weight** ≥ 40 kg
	Route IM	**Route** IM	**Route** IM	**Route** IM
Dose	15 mg/kg	45 mg/kg	600 mg	1800 mg
Max. single dose	600 mg	600 mg	600 mg	1800 mg
Dosing interval	15 min.	60 min.	15 min.	60 min.
Max. # of doses	3	2	3	2

Consider diazePAM		
	Weight < 50 kg	**Weight** ≥ 50 kg
	Route IM	**Route** IM
Dose	0.2 mg/kg	10 mg
Max. single dose	10 mg	10 mg
Dosing interval	N/A	N/A
Max. # of doses	1	1

Consider midazolam (if not using diazePAM)		
	Weight < 50 kg	**Weight** ≥ 50 kg
	Route IM	**Route** IM
Dose	0.2 mg/kg	10 mg
Max. single dose	10 mg	10 mg
Dosing interval	5 min.	5 min.
Max. # of doses	2	2

Clinical Considerations

Consider using autoinjector for patients who are <50 kg with severe symptoms if there is any perceived delay to treatment.

Atropine should be administered prior to airway interventions if secretions are copious.

Pralidoxime should be given as soon as possible after the administration of atropine.

Subsequent doses of atropine are intended for patients showing signs of bronchial secretions and may be repeated as indicated until airway secretions are controlled.

Decontamination procedures must be integrated with antidote administration.

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Symptomatic Riot Agent Exposure Medical Directive – AUXILIARY CHEMICAL EXPOSURE

An Advanced Care Paramedic may provide the treatment prescribed in this auxiliary Medical Directive if authorized.

Indications

Known or suspected exposure to a riot agent with signs and symptoms of a riot agent exposure.

Conditions

Topical anaesthetic eye drops	
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

Topical anaesthetic eye drops
Allergy or sensitivity to local anaesthetics

Treatment

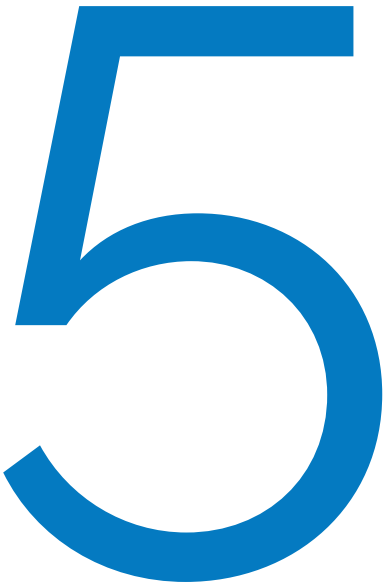
Consider topical anaesthetic eye drops	
	Route
	TOP
Dose	2 gtts/eye
Max. single dose	2 gtts/eye
Dosing interval	10 min
Max. # of doses	N/A

Clinical Considerations

For skin or mucous membrane contact, ensure thorough irrigation.

For eye exposure, remove patient`s contact lenses if applicable prior to initiating treatment. Use anaesthetic eye drops for comfort and then irrigate eyes with normal saline for at least 15 minutes.

Section 5 – Certification Standard



Preamble

All Paramedics shall obtain and maintain the qualifications required by the *Ambulance Act.* This document sets out the requirements and processes related to Certification.

Definitions

Terms defined in the *Ambulance Act* and Ontario Regulation 257/00 shall have the same meaning in this Certification Standard and the following terms have the following meanings:

"Authorization"

means written approval to perform Controlled Acts and other advanced medical procedures requiring medical oversight of a Medical Director;

"Business Day"

means any working day, Monday to Friday inclusive, excluding statutory and other holidays, namely: New Year's Day; Family Day; Good Friday; Easter Monday; Victoria Day; Canada Day; Civic Holiday; Labour Day; Thanksgiving Day; Remembrance Day; Christmas Day; Boxing Day and any other day on which the province has elected to be closed for business;

"Certification"

means the process by which Paramedics receive Authorization from a Medical Director to perform Controlled Acts and other advanced medical procedures in accordance with the ALS PCS;

"Continuing Medical Education (CME)"

means a medical education program and confirmation of its successful completion as approved by the Regional Base Hospital Program (RBHP);

"Consolidation"

means the process by which a condition is placed on a Paramedic's Certification restricting his or her practice to working with another Paramedic with the same or higher level of qualification (*i.e.* Certification);

"Controlled Act"

means a Controlled Act as set out in subsection 27(2) of the *Regulated Health Professions Act, 1991*;

"Critical Omission or Commission"

means the performance of a Controlled Act or other advanced medical procedure listed in the ALS PCS that a Paramedic is not authorized to perform; or an action or lack of action, including the performance of a Controlled Act or other advanced medical procedure listed in the ALS PCS, by the Paramedic that has negatively affected or has the potential to negatively affect patient morbidity or mortality, with a potentially life, limb or function threatening outcome;

"Deactivation"

means the temporary revocation, by the Medical Director, of a Paramedic's Certification;

"Decertification"

means the revocation, by the Medical Director, of a Paramedic's Certification;

"Director"

means a person who holds that position within the Emergency Health Regulatory and Accountability Branch (EHRAB) of the Ministry of Health (MOH);

"Emergency Health, Regulatory and Accountability Branch (EHRAB) Investigations Services Unit (ISU)

The investigation services unit consisting of investigators as set out in section 18 of the *Ambulance Act,*.

Notifications shall be sent to **Inspections_Investigations@ontario.ca**

"Employer"

means an ambulance service operator certified to provide ambulance services as defined in the *Ambulance Act*;

"Major Omission or Commission"

means an action or lack of action, including the performance of a Controlled Act or other advanced medical procedure listed in the ALS PCS, by the Paramedic that has negatively affected or has the potential to negatively affect patient morbidity without a potentially life, limb or function threatening outcome;

"Minor Omission or Commission"

means an action or lack of action, including the performance of a Controlled Act or other advanced medical procedure listed in the ALS PCS, by the Paramedic that may have negatively affected patient care in a way that would delay care to the patient or lengthen the patient's recovery period, but has not negatively affected patient morbidity;

"Ontario Base Hospital Group (OBHG) Executive"

means a provincial body comprised of representatives from RBHPs as defined in the Terms of Reference for OBHG Executive and approved by the MOH;

"Paramedic"

means a paramedic as defined in subsection 1(1) of the *Ambulance Act*, and for purposes of this Standard a reference to the term includes a person who is seeking Certification as a Paramedic, where applicable;

"Paramedic Practice Review Committee (PPRC)"

is a committee that performs an independent, external advisory role, providing information and expert opinion to the Medical Director on issues related to Paramedic practice when the Medical Director is considering Decertification of a Paramedic;

"Patient Care Concern"

means a Critical Omission or Commission, Major Omission or Commission, or Minor Omission or Commission;

"Reactivation"

means the reinstatement of a Paramedic's Certification after a period of Deactivation;

"Regional Base Hospital Program (RBHP)"

means a base hospital program as defined in subsection 1(1) of the *Ambulance Act;*

"Remediation"

means a customized plan by the RBHP to address a Patient Care Concern or to address any concerns identified during Certification, including a failure to meet a requirement for the maintenance of Certification;

"Senior Field Manager"

means a person who holds that position within the EHS Division of the MOH, and for the purposes of this Standard a reference to the term means the relevant Senior Field Manager responsible for the applicable RBHP.

Processes

Certification

A Medical Director may certify a Paramedic to perform Controlled Acts and other advanced medical procedures listed in the ALS PCS. A Medical Director may stipulate other requirements relating to Paramedic Certification. The Medical Director shall communicate such requirements to the Paramedic and the Employer in writing. The Medical Director shall notify the Paramedic and Employer within three (3) Business Days of the decision with respect to Certification as to whether the Paramedic was successful or not in attaining his or her Certification.

Consolidation

The Medical Director shall require Consolidation on all new Certifications[1]. A Medical Director may require Consolidation with respect to a Paramedic's Certification where the Paramedic is returning to practice, a Patient Care Concern has been identified in respect of the Paramedic, or as identified in the Paramedic's customized plan for Remediation. Consolidation provides for the opportunity to acquire more skills and confidence while ensuring that a support mechanism is in place for the Paramedic. The Medical Director shall determine the requirements for the Consolidation, which include the presence of another Paramedic, the level of qualification of that other Paramedic, and the restrictions of the Paramedic's practice in relation to the presence of that other Paramedic. The Medical Director, in consultation with the Employer, shall determine the duration for the Consolidation. However, the duration for Consolidation on all new Certifications shall be a minimum of 36 hours for a PCP and a minimum of 168 hours for an ACP or CCP. The Medical Director shall provide notice of Consolidation and the requirements thereof in writing to the Paramedic and Employer within two (2) Business Days. Any changes to the Consolidation by the Medical Director shall be communicated to the Paramedic and Employer immediately and any changes to the requirements thereof shall be provided in writing as soon as possible.

[1] See New Certification process

Responding to a Patient Care Concern

The RBHP shall assess all matters regarding patient care to determine whether or not there is a Patient Care Concern and the Employer shall assist where required. Where a matter regarding patient care is identified by the Employer that may be a Patient Care Concern, the Employer shall notify the RBHP as soon as possible.

Where the Patient Care Concern is a Minor Omission or Commission the RBHP shall notify the Paramedic and Employer by aggregate reports provided semi-annually.

Where the Patient Care Concern is a Major Omission or Commission, a Critical Omission or Commission, or a repetition of Minor Omissions or Commissions the RBHP shall notify the Paramedic and Employer of the patient care concern and provide notice in writing as soon as possible.

The written notice shall indicate that the Patient Care Concern is being considered to determine whether the Paramedic will be subject to Remediation, Deactivation or Decertification.

Remediation

A Medical Director may require the Paramedic to receive Remediation. The customized plan in the Remediation shall identify the concern, the remedial action to be followed, and the objectives to be achieved. The plan shall include a specific timeframe in which the Paramedic must successfully complete the Remediation. The RBHP shall develop the plan, in consultation with the Employer as necessary, as soon as possible. Once developed, the RBHP shall provide the written plan to the Paramedic and Employer. Any changes to the plan by the RBHP shall be communicated to the Paramedic and Employer immediately and the updated written plan shall be provided as soon as possible. The Medical Director shall notify the Paramedic and Employer in writing within three (3) Business Days of the successful completion of the Remediation.

Deactivation

A Medical Director may deactivate a Paramedic's Certification for which the Paramedic has received Authorization.

Deactivation may occur as a result of:

1. a Patient Care Concern;
2. failure to respond to the RBHP's requests for feedback or interviews regarding a Critical Omission or Commission, Major Omission or Commission or Minor Omission or Commission within a reasonable period of time as specified by the RBHP;
3. failure to successfully complete Remediation;
4. misconduct related to Certification (*e.g.* falsification of documentation, failure to disclose previous Deactivations and Decertifications, including practice in other jurisdictions);
5. repeated Deactivations in similar clinical areas; or
6. failure to meet the requirements for maintenance of Certification.

The Medical Director shall notify and provide a brief written reason for the Deactivation, as soon as possible to the:

(i) Paramedic,
(ii) Employer,
(iii) Senior Field Manager,
(iv) EHRAB ISU, and
(v) all other RBHPs of a Deactivation.

Following a Deactivation, the Medical Director shall determine whether the requirements for Remediation or the requirements for maintenance of Certification have been met, as the case may be, at which time the Medical Director shall either proceed with Reactivation or Decertification. The Remediation and Reactivation process shall be completed as soon as possible; however it shall not exceed ninety (90) consecutive days in length. Where the Medical Director has proceeded with Reactivation, the Medical Director shall immediately notify the Paramedic, Employer, the Senior Field Manager, and all other RBHPs of the Reactivation.

Decertification

A Medical Director shall revoke a Paramedic's Certification where that person is no longer employed or retained as a volunteer by an Employer and that person shall be deemed to have undergone Decertification and the PPRC process does not apply. In all other circumstances, a Medical Director shall not proceed with a Decertification unless:

a) a PPRC has been convened and has provided its written recommendations to the Medical Director and the Paramedic; or
b) the Paramedic has waived the PPRC process in writing.

The Medical Director shall immediately notify the:

(i) Paramedic;
(ii) Employer;
(iii) Senior Field Manager;
(iv) EHRAB ISU, and;
(v) all other RBHPs

of their decision to either proceed with Reactivation or Decertification of a Paramedic and provide a written explanation outlining the reasons for this decision as soon as possible.

New Certification

The following requirements apply with respect to Paramedics who are seeking Certification from an RBHP and who are not currently certified at that level by another RBHP, including Paramedics who have been previously certified in Ontario.

1. The Paramedic shall be employed or retained by an Employer.
2. The Paramedic shall complete a form provided by the RBHP that includes the following:
    a. a list of all RBHPs or other certifying bodies under which the Paramedic has previously received Certification within the ten (10) year period immediately preceding the application;
    b. a declaration of the dates of all previous Deactivations and/or Decertifications that have previously occurred at all other RBHPs or other certifying bodies[2] within the ten (10) year period immediately preceding the application; and
    c. written permission for the prospective RBHP to obtain information in writing from other employers, other physicians, other programs, *etc.* regarding the Paramedic's previous practice.
3. The Paramedic shall successfully complete an evaluation by the RBHP and any orientation and training required by the RBHP. The evaluation may include:
    a. an assessment of knowledge and skills;
    b. scenario evaluation; and
    c. oral interview or clinical evaluation with the Medical Director or designate.

Upon meeting the above requirements, for new Certification, the Medical Director shall certify the Paramedic and require a condition of Consolidation on the Paramedic's Certification.

[2] Or a declaration of dates when certification was denied, revoked, suspended or under review as other certifying bodies may not use the terms Deactivation and Decertification

Cross Certification

The following requirements apply with respect to Paramedics who are already certified and who are seeking Certification by a Medical Director in another RBHP.

1. The Paramedic shall be employed or retained by an Employer within the specified catchment area.
2. The Paramedic shall complete a form provided by the RBHP that includes the following:
   a. a list of all RBHPs under which the Paramedic has received Certification within the ten (10) year period immediately preceding the application;
   b. a declaration of the dates of all previous Deactivations and/or Decertifications that have occurred within the ten (10) year period immediately preceding the application;
   c. status of all current Certifications from all RBHPs; and
   d. written permission for the prospective RBHP to obtain information in writing from other physicians, other programs, *etc.* regarding the Paramedic's previous practice.
3. The Paramedic shall successfully complete an evaluation by the RBHP and any orientation and training required by the RBHP. The evaluation may include:
   a. an assessment of knowledge and skills;
   b. scenario evaluation; and
   c. oral interview or clinical evaluation with the Medical Director or designate.

Upon meeting the above requirements for Cross Certification, the Medical Director shall certify the Paramedic.

Maintenance of Certification

The following requirements apply with respect to Paramedics regarding the maintenance of Certification.

1. The Paramedic shall demonstrate competency in the performance of Controlled Acts and other advanced medical procedures, compliance with the ALS PCS, and the provision of patient care at the Paramedic's level of Certification. Competency and compliance shall be determined by the Medical Director and may include chart audits, field evaluations, and RBHP patch communication review.
2. The Paramedic shall not have an absence from providing patient care that exceeds ninety (90) consecutive days.
3. The Paramedic shall either,
   a. provide patient care to a minimum of ten (10) patients per year whose care requires assessment and management at the Paramedic's level of Certification, or
   b. where a Paramedic is unable to assess and manage the minimum of ten (10) patients per year, demonstrate alternate experience, as approved by the Medical Director, that may involve 1 or more of the following:
      i. other patient care activities;
      ii. additional CME;
      iii. simulated patient encounters; and
      iv. clinical placements.
4. The Paramedic shall complete at least 1 evaluation per year at the appropriate level of Certification, which may include: an assessment of knowledge and evaluation of skills; scenarios; and on-line learning and evaluation.
5. The Paramedic shall complete a minimum of CME hours per year as follows: eight (8) hours for PCPs, twelve (12) hours for PCP Flight, twenty-four (24) hours for ACPs[3], and seventy-two (72) hours for ACP Flight and CCP. CME hours include hours completed as part of an evaluation required by paragraph 4.

[3] With respect to an ACP whose Certification has been for a period of less than a year and who has completed a minimum of eight (8) hours of CME, the Medical Director shall proportionally adjust the remaining required CME hours.

Upon meeting the above requirements for maintenance of Certification, the Medical Director shall certify the Paramedic.

Paramedic Practice Review Committee (PPRC)

The PPRC is convened by another RBHP through the OBHG Executive Chair to perform an independent, external advisory role, providing information and expert opinion to the affected Medical Director on issues related to Paramedic practice when a Medical Director is considering Decertification of a Paramedic following Deactivation. When the RBHP is engaged for the purposes of a PPRC process the RBHP is termed the "host RBHP". The parties to the PPRC process are the affected Medical Director and the Paramedic who is subject of the consideration of Decertification.

Membership

The members of the PPRC shall be:

- the host RBHP Manager/Director, who will act as Chair;
- host Medical Director; and
- two (2) Peer Paramedics.

Selection of Peer Paramedics: One (1) peer Paramedic shall be selected by the host RBHP and one (1) peer Paramedic by the affected Paramedic from a pre-identified group of eligible Paramedics. All members of this group shall:

- hold Certification from the host RBHP for the preceding twelve (12) months at the same level or higher as the Paramedic who is subject of the consideration of Decertification; and
- not have any operational relationship or personal relationship with the affected RBHP, Medical Director, or the Paramedic;

Confidentiality: All members of the PPRC shall keep confidential all information obtained during the PPRC process.

Recommendations

The PPRC shall provide written recommendations to the Medical Director who is considering Decertification of a Paramedic. The recommendation of the PPRC shall be made by consensus. The recommendation rendered by the PPRC is not subject to appeal or other challenge and is not binding on the affected Medical Director. The affected Medical Director is responsible for making the final decision with respect to the Decertification of the affected Paramedic.

PPRC Process

1. The affected Medical Director shall notify the OBHG Executive Chair that a PPRC is required regarding a consideration to proceed with the Decertification of a Paramedic.
2. If the OBHG Executive Chair is employed by the affected RBHP, he/she shall send the request to the OBHG Executive Vice Chair. (All subsequent references to the "OBHG Executive Chair" shall be references to the OBHG Executive Vice Chair, as applicable.)
3. The OBHG Executive Chair shall ensure that the PPRC adheres to all established timelines in the process by communicating directly with the PPRC Chair.
4. The OBHG Executive Chair shall select an appropriate host RBHP.
5. The OBHG Executive Chair shall provide notice to the affected Medical Director and Paramedic, in a format set out in *Appendix A*, that a PPRC has been convened to review the case.
6. The affected Medical Director and Paramedic shall provide any written submissions to the OBHG Executive Chair within fifteen (15) Business Days of receiving notice that a PPRC has been convened.
7. Submissions shall be sent via courier requiring signature of receipt, registered mail, fax (with confirmation) or email (with confirmation).
8. The OBHG Executive Chair shall provide a copy of each party's submission to the other party within five (5) Business Days.
9. Both parties shall have the opportunity to respond to the original submissions within fifteen (15) Business Days of their receipt.
10. The OBHG Executive Chair shall provide a copy of all submissions to the affected Paramedic, Medical Director and four (4) copies to the PPRC Chair.

11. The PPRC Chair shall provide copies of the submissions to the other members of the PPRC.
12. The PPRC shall not begin its review until receipt of all submissions.
13. If clarification of an issue or information regarding applicable standards or legislation is required, the PPRC Chair shall request the clarification or information in writing from the relevant party. The response to the request shall be provided to the PPRC Chair and the other party in writing, within ten (10) Business Days of the request.
14. The PPRC Chair shall provide a copy of the response to OBHG Executive Chair.
15. The PPRC shall review the submissions and any responses within fifteen (15) Business Days from receipt of the full submission. If an extension is required the request will be made to the OBHG Executive Chair. The PPRC will render a written recommendation containing the supporting rationale, within ten (10) Business Days of the final review meeting and submit it to the OBHG Executive Chair.
16. The OBHG Executive Chair shall send a copy of the final recommendation to both parties.

Appendix A - Paramedic Practice Review Committee Letter

<<Date>>

A Paramedic Practice Review Committee (PPRC) has been convened to review <<brief details of case/incident>>.

The PPRC is convened by another RBHP through the OBHG Executive Chair to perform an independent, external advisory role, providing information and expert opinion to the affected Medical Director on issues related to Paramedic practice when a Medical Director is considering Decertification of a Paramedic following Deactivation. When the RBHP is engaged for the purposes of a PPRC process the RBHP is termed the "host RBHP". The affected Medical Director shall not proceed with Decertification unless a PPRC has been convened and has provided its written recommendations to the affected Medical Director and the Paramedic.

Recommendations

The PPRC shall provide written recommendations, including supporting rationale, to the Medical Director regarding the consideration to decertify a Paramedic. The recommendation of the PPRC shall be made by consensus. The recommendation rendered by the PPRC is not subject to appeal or other challenge and is not binding on the affected Medical Director. The affected Medical Director is responsible for making the final decision with respect to the Decertification of the affected Paramedic.

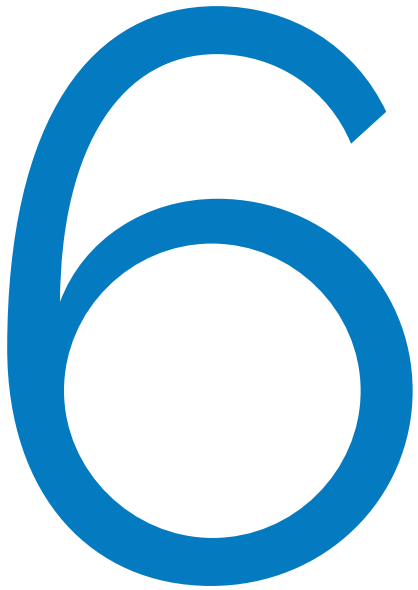
Membership

<<Medical Director>>	<<Regional Base Hospital Program Manager/Director>>
<<Peer Paramedic>>	<<Peer Paramedic>>

Process:

- The affected Medical Director shall notify the OBHG Executive Chair that a PPRC is required regarding a consideration to proceed with the Decertification of a Paramedic.
- The OBHG Executive Chair shall select an appropriate host RBHP and provide notice to both parties that a PPRC has been convened to review the case.
- Both parties shall provide any written submissions to the OBHG Executive Chair within fifteen (15) Business Days of receiving notice that a PPRC has been convened.
- The OBHG Executive Chair shall provide a copy of each party's submission to the other party within five (5) Business Days and both parties shall have the opportunity to respond to the original submissions within fifteen (15) Business Days of their receipt.
- The OBHG Executive Chair shall provide a copy of all submissions to both parties and four (4) copies to the PPRC Chair to distribute to the other members of the PPRC. The PPRC shall begin its review once all submissions are received.
- If clarification of an issue or information regarding applicable standards or legislation is required, the PPRC Chair shall request the clarification or information in writing from the relevant party. The response to the request shall be provided to the PPRC Chair and the other party in writing, within ten (10) Business Days of the request.
- The PPRC shall review the submissions and any responses within fifteen (15) Business Days from receipt of the full submission. If an extension is required the request will be made to the OBHG Executive Chair.
- The PPRC will render a written recommendation containing the supporting rationale, within ten (10) Business Days of the final review meeting and submit it to the OBHG Executive Chair.
- The OBHG Executive Chair shall send a copy of the final recommendation to both parties.

Section 6 – Research Trial Standard



Research Trial Standard

MOH may, at its discretion, approve research trials that include patient care practices that are different from those otherwise set out in the Standards.

A paramedic properly enrolled in an approved research trial shall:

1. determine whether a patient may be treated in accordance with a research trial, only if the following conditions have been met:
    a. MOH has approved the patient care practices set out in the research trial as an alternate standard than to those set out in the Standards;
    b. The research trial has been approved by a Research Ethics Board (REB) that:
        i. abides by and is consistent with the version of the Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans current at the time of submission, and
        ii. meets the requirements for an REB set out in section 15 of O. Reg. 329/04 made under PHIPA, and

Guideline

Recall section 44 of PHIPA, which includes provisions related to personal health information and researchers.

    c. The research trial has been reviewed and supported in writing by the Ontario Base Hospital Group Medical Advisory Committee;
2. obtain the appropriate patient consent for participation in the research trial; and

Guideline

Recall paragraph 11 of the *General Measures Standard* of the *Basic Life Support Patient Care Standards*, which specifies that the paramedic shall also obtain consent for patient care as per the *Health Care Consent Act, 1996* (Ontario)

3. where authorized, provide care in accordance with the approved research trial.

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Ontario