Advanced Life Support Patient Care Standards

Version 4.3

Comes into force July 17, 2017

Emergency Health Services Branch
Ministry of Health and Long-Term Care

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. Appendix 6 retitled: Certification Standard.
4.0	October 2016	N/A (amended prior to in force date)	Full update. See accompanying Summary of Changes.
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 (PCP/ACP).
4.2	May 2017	December 11, 2017	Updates to Emergency Childbirth Medical Directive (PCP/ACP), Suspected Adrenal Crisis Medical Directive (PCP/ACP) and various housekeeping edits (e.g. IV provisions)

Version Number	Date of Issue	Comes into Force Date	Brief Description of Change
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.

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Advanced Life Support Patient Care Standards

Version 4.3

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.

Format of the ALS PCS

This document is comprised of a Preamble section and six (6) appendices: Appendix 1 – PCP Core Medical Directives; Appendix 2 – ACP Core Medical Directives; Appendix 3 – PCP Auxiliary Medical Directives; Appendix 4 – ACP Auxiliary Medical Directives; Appendix 5 – Chemical Exposure Medical Directives; and Appendix 6 – Certification Standard. Critical Care Paramedics and Advanced/Primary Care Flight Paramedics will perform controlled acts in accordance with the Base Hospital (BH) Medical Directives issued by the Ornge Base Hospital Physician (BHP).

Use of the Medical Directives by Paramedics

These Medical Directives apply to paramedics who are authorized by a RBH Medical Director to provide patient care. Delegation of controlled acts in the ALS PCS to paramedics falls under the exclusive oversight of the RBH Programs.

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") skills may be delegated through use of the Auxiliary Medical Directives. Delegation of Auxiliary Medical Directives by a RBH Medical Director to paramedics is optional

and may be introduced after consultation and mutual agreement between the RBH 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.

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 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 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.

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 treatment;
b) consent must relate to the treatment;
c) consent must be informed;
d) consent must be given voluntarily; and
e) consent must not be obtained through misrepresentation or fraud.

Consent to treatment 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:
    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 capable with respect to the treatment. 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.

A patient is capable with respect to treatment 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 treatment.

If a patient is incapable of consenting to a proposed treatment, 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).

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.

Comprehensive Care

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.

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.

"PCP Autonomous IV" is authorized 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 provincial Medical Advisory Committee.

Home Medical Technology and Novel Medications

As community care advances, new home medical technologies and novel medications are being introduced for home use by highly trained patients and caregivers. 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.

These can be encountered unexpectedly by paramedics without any prior knowledge that these technologies or medications are being used in the community. Paramedics may not be familiar with the use of these technologies or medications, even though they may be required to provide care.

In some cases, when Base Hospital Medical Directors are alerted to these devices, medications or care requirements, a local medical directive may be issued to guide specific care for these patients. Such directives should be followed until further consideration by the Medical Advisory Committee.

A paramedic may assume patients or caregivers have knowledge about the technology or medication if they confirm that they were trained in its use and/or administration. A paramedic should advise the patient or caregiver to follow any specific steps or provide any advice about restarting/stopping the device or novel medication. A paramedic may only assist a patient within the authorized paramedic skill set.

When care requirements are uncertain, but the patient is stable, transport the patient. If the patient is unstable, consider patching to the BHP. Alternatively, consider contacting the responsible member of a regulated health profession.

A paramedic may follow written advice provided by their Base Hospital Medical Directors even if this advice is outside the conditions and contraindications of the BLS PCS and ALS PCS.

Patching

A paramedic shall patch to the Base Hospital when:

a) a medical directive contains a mandatory provincial patch point; **OR**
b) an RBH introduces a mandatory BH patch point; **OR**
c) 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**
d) there is uncertainty about the appropriateness of a medical directive, either in whole or in part.

In cases where a treatment option requires the prior authorization by the BHP (*i.e.* mandatory provincial patch point or mandatory BH patch point) 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 is in severe distress and, in the paramedic's opinion, the medical directive would otherwise apply. Clinical judgement must be applied and an acceptable standard of care must be met. This may be based on peer and expert review. In such cases, a paramedic should continue attempts to contact the BHP after the treatment has been initiated. All patch failures must be reported in a timely manner in accordance with local policy and procedures. Paramedics should document the attempts to patch to the BH 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 he or she cannot comply with the direction as it exceeds his or her 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 RBH policies regarding reporting of clinical care incidents to the RBH.

Responsibility for Care

While on scene, the highest level paramedic shall assess the patient and make a decision on the level of care required, and on the level of paramedic required for the care of the patient. The highest level paramedic is the ultimate patient care authority on the scene. 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.

In all patient care, the highest level of paramedic is responsible for the care of the patient, including decisions on the level of care required during transport. A paramedic may choose to assign aspects of care and procedures to an alternate level paramedic, as long as the care and procedures are within that paramedic's scope of practice. Paramedics must alert the highest level paramedic of any change of patient status.

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 MOHLTC.

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 should initiate the treatment unless there is strong clinical rationale to withhold it. A paramedic must document his or her justification for withholding treatment on the ACR.

Medication Doses and Administration

Medication doses may be either in per kilogram or fixed doses, depending on common clinical practice. The number of recommended medication doses may be administered regardless of any previous self-administration by a patient. 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 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.

Age and Vital Signs

The general age cut off between adults and pediatrics is 18 years. 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. 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
Atrioventricular	AV
Automated external defibrillation	AED
B	
Base Hospital	BH
Base Hospital Physician	BHP
Basic Life Support	BLS
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
Centimetre	cm
Continuous positive airway pressure	CPAP
Cardiopulmonary Resuscitation	CPR
College of Physicians and Surgeons of Ontario	CPSO
Canadian Triage and Acuity Scale	CTAS

Word/Phrase	Abbreviation
Cerebral vascular accident	CVA
Central venous access device	CVAD
D	
Diabetic ketoacidosis	DKA
Do Not Resuscitate	DNR
Drops	gtts
E	
Electronic control device	ECD
Electrocardiogram	ECG
Esophageal detection device	EDD
Emergency department	ED
End tidal carbon dioxide	$ETCO_2$
Endotracheal tube	ETT
Every	q
F	
Fraction of inspired oxygen	FiO_2
Febrile respiratory infection	FRI
G	
Gram	g
Glasgow Coma Scale	GCS
H	
Heart Rate	HR
History	Hx
I	
Intramuscular	IM
Intranasal	IN

Word/Phrase	Abbreviation
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 and Long-Term Care	MOHLTC
N	
Not applicable	N/A
Nostril	nare
Nebulized	NEB
Nasopharyngeal airway	NPA
Non-steroidal anti-inflammatory drug	NSAID

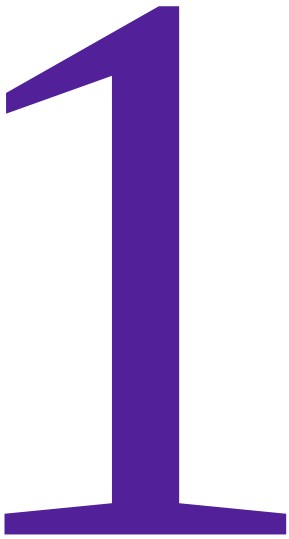
Word/Phrase	Abbreviation
O	
Ontario Base Hospital Group-Medical Advisory Committee	OBHG-MAC
Oropharyngeal airway	OPA
P	
Pediatric	Ped
Primary Care Paramedic	PCP
Pulseless electrical activity	PEA
R	
Regional Base Hospital	RBH
Return of spontaneous circulation	ROSC
Respiratory rate	RR
S	
Sodium chloride	NaCl
Subcutaneous	SC
Sublingual	SL
Systolic blood pressure	SBP
Saturation of peripheral oxygen	SpO_2
ST-segment elevation myocardial infarction	STEMI
T	
Topical	TOP
Termination of Resuscitation	TOR
Traumatic brain injury	TBI
Tricyclic antidepressant	TCA
Transcutaneous pacing	TCP
U	
Upper respiratory tract infection	URTI

Word/Phrase	Abbreviation
V	
Ventricular Fibrillation	VF
Ventricular Tachycardia	VT
Vital signs absent	VSA
W	
Water	H_2O
Within normal limits	WNL

Reference and Educational Notes

The RBHs 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-study. The reference and educational notes do not define a standard of care; however, they should be considered useful in ensuring that an appropriate standard of care is met.

Appendix 1 – PCP Core Medical Directives



Appendix 1 – PCP Core Medical Directives

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.

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	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT

AED Defibrillation	
Age	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Defibrillation indicated

Epinephrine	
Age	N/A
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Anaphylaxis suspected as causative event

Medical TOR	
Age	≥18 years
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Arrest not witnessed by EMS **AND** No ROSC **AND** No defibrillation delivered

Contraindications

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

Manual Defibrillation
Rhythms other than VF or pulseless VT

AED Defibrillation
Non-shockable rhythm

Epinephrine
Allergy or sensitivity to epinephrine

Medical TOR
Arrest thought to be of non-cardiac origin

Treatment

Consider CPR

Consider Manual defibrillation (if available and authorized)		
	Age	**Age**
	≥30 days to <8 years	≥8 years
Dose	1 defibrillation	1 defibrillation
Initial dose	2 J/kg	As per BH / manufacturer
Subsequent dose(s)	4 J/kg	As per BH / manufacturer
Dosing interval	2 min	2 min
Max. # of doses	4	4

Consider AED defibrillation (if not using manual defibrillation)			
	Age		**Age**
	≥30 days to <8 years		≥8 years
	With Pediatric Attenuator Cable	Without Pediatric Attenuator Cable	N/A
Dose	1 defibrillation	1 defibrillation	1 defibrillation
Max. single dose	As per BH / manufacturer	As per BH / manufacturer	As per BH / manufacturer
Dosing interval	2 min	2 min	2 min
Max. # of doses	4	4	4

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 BHP for authorization, following the 3rd analysis, to consider Medical TOR (if applicable). If the BH patch fails, or the medical TOR does not apply, transport to the closest appropriate receiving facility following ROSC or the 4th analysis.

Clinical Considerations

Consider very early transport after the 1st analysis (and defibrillation if indicated) in the following settings: pregnancy presumed to be ≥20 weeks gestation (fundus above umbilicus, ensure manual displacement of uterus to left), hypothermia, airway obstruction, suspected pulmonary embolus, medication overdose/toxicology, or other known reversible cause of arrest not addressed.

Similarly, plan for extrication and transport for patients with refractory ventricular fibrillation and pediatric cardiac arrest (after 3 analyses), ensure quality CPR can be continued.

In cardiac arrest associated with opioid overdose, continue standard medical cardiac arrest directive. There is no clear role for routine administration of naloxone in confirmed cardiac arrest.

Follow the *Deceased Patient Standard* once TOR has been implemented.

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	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT

AED Defibrillation	
Age	≥30 days
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** Monitored HR = 0 **OR** Monitored HR >0 with the closest ED ≥30 min transport time away.

Contraindications

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

Manual Defibrillation
Rhythms other than VF or pulseless VT

AED Defibrillation
Non-shockable rhythm

Trauma TOR
Age <16 years
Defibrillation delivered
Monitored HR >0 and closest ED <30 min transport time away

Treatment

Consider CPR

Consider Manual defibrillation (if available and authorized)

	Age	**Age**
	≥30 days to <8 years	≥8 years
Dose	1 defibrillation	1 defibrillation
Initial dose	2 J/kg	As per BH / manufacturer
Dosing interval	N/A	N/A
Max. # of doses	1	1

Consider AED defibrillation (if not using manual defibrillation)

	Age		Age
	≥30 days to <8 years		≥8 years
	With Pediatric Attenuator Cable	Without Pediatric Attenuator Cable	N/A
Dose	1 defibrillation	1 defibrillation	1 defibrillation
Max. single dose	As per BH / manufacturer	As per BH / manufacturer	As per BH / manufacturer
Dosing interval	N/A	N/A	N/A
Max. # of doses	1	1	1

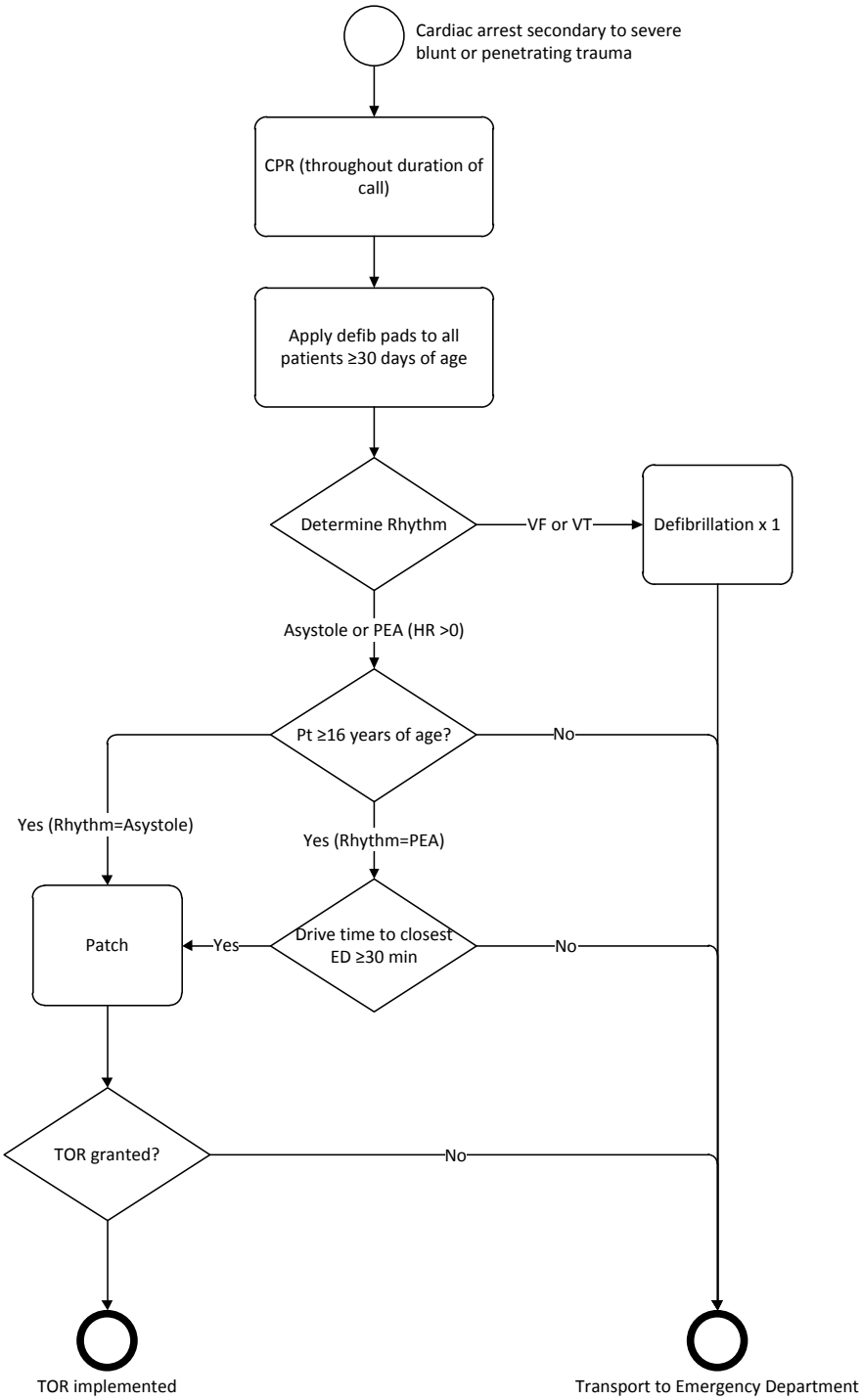
Mandatory Provincial Patch Point

Patch to BHP for authorization to apply the Trauma TOR if applicable. If the BH 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.

Treatment – Algorithm For Trauma Arrest



Hypothermia 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 hypothermia.

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	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT

AED Defibrillation	
Age	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Defibrillation indicated

Contraindications

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

Manual Defibrillation
Rhythms other than VF or pulseless VT

AED Defibrillation
Non-shockable rhythm

Treatment

Consider CPR

Consider Manual defibrillation (if available and authorized)

	Age	Age
	≥30 days to <8 years	≥8 years
Dose	1 defibrillation	1 defibrillation
Initial dose	2 J/kg	As per BH / manufacturer
Dosing interval	N/A	N/A
Max. # of doses	1	1

Consider AED defibrillation (if not using manual defibrillation)			
	Age		**Age**
	≥30 days to <8 years		≥8 years
	With Pediatric Attenuator Cable	Without Pediatric Attenuator Cable	N/A
Dose	1 defibrillation	1 defibrillation	1 defibrillation
Max. single dose	As per BH / manufacturer	As per BH / manufacturer	As per BH / manufacturer
Dosing interval	N/A	N/A	N/A
Max. # of doses	1	1	1

Clinical Considerations

Transport to the closest appropriate facility without delay following the 1st analysis.

Foreign Body Airway Obstruction Cardiac Arrest Medical Directive

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

Indications

Cardiac arrest secondary to an airway obstruction.

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	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT

AED Defibrillation	
Age	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Defibrillation indicated

Contraindications

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

Manual Defibrillation
Rhythms other than VF or pulseless VT

AED Defibrillation
Non-shockable rhythm

Treatment

Consider CPR

Consider foreign body removal (utilizing BLS PCS maneuvers)

Consider Manual defibrillation (if available and authorized)

	Age	**Age**
	≥30 days to <8 years	≥8 years
Dose	1 defibrillation	1 defibrillation
Initial dose	2 J/kg	As per BH / manufacturer
Dosing interval	N/A	N/A
Max. # of doses	1	1

Consider AED defibrillation (if not using manual defibrillation)			
	Age		**Age**
	≥30 days to <8 years		≥8 years
	With Pediatric Attenuator Cable	Without Pediatric Attenuator Cable	N/A
Dose	1 defibrillation	1 defibrillation	1 defibrillation
Max. single dose	As per BH / manufacturer	As per BH / manufacturer	As per BH / manufacturer
Dosing interval	N/A	N/A	N/A
Max. # of doses	1	1	1

Clinical Considerations

If the patient is in cardiac arrest following removal of the obstruction, initiate management as a medical cardiac arrest.

If the obstruction cannot be removed, transport to the closest appropriate facility without delay following the 1st analysis.

Neonatal Resuscitation Medical Directive

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

Indications

Neonatal patient.

Conditions

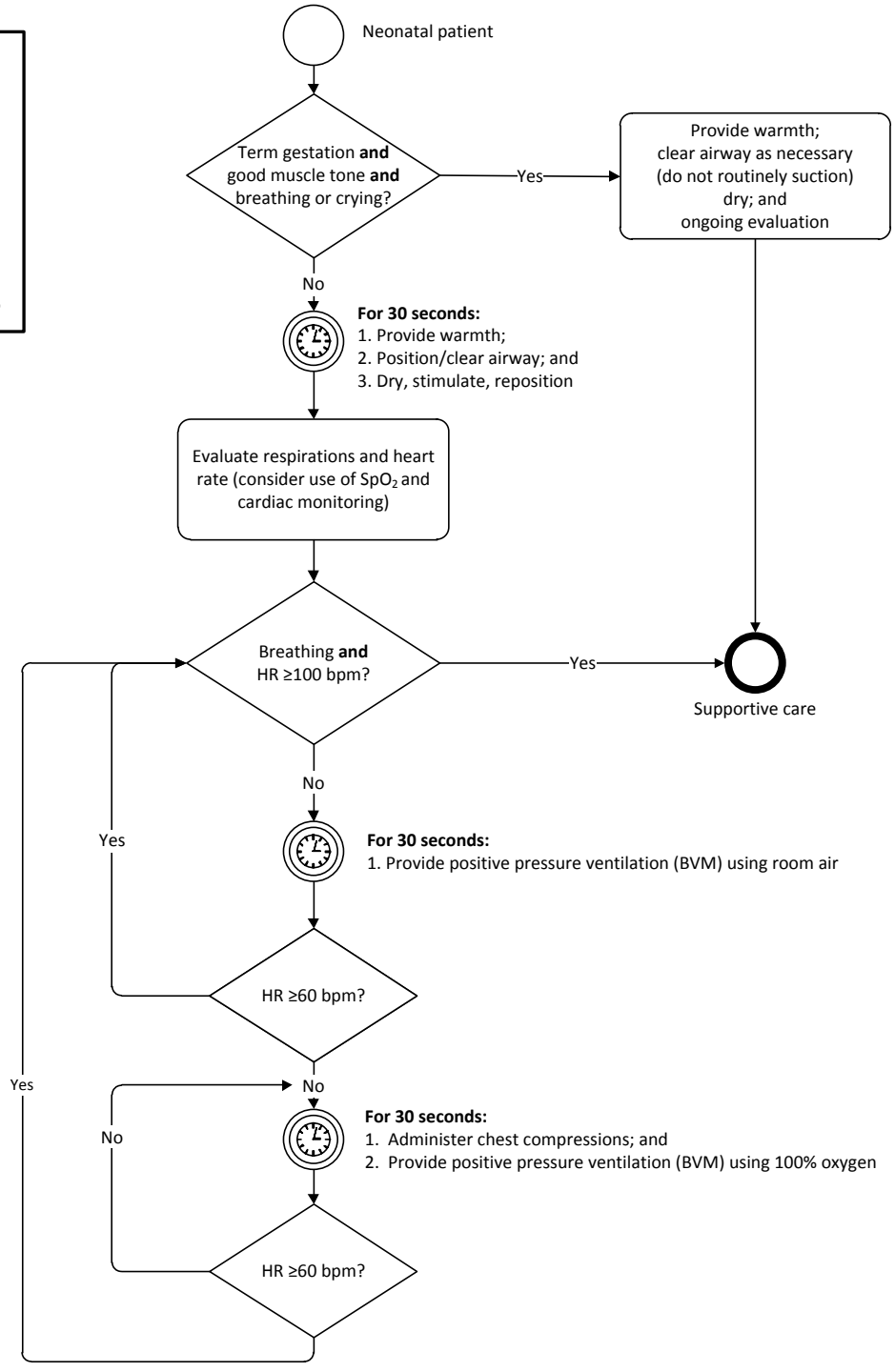
	Resuscitation
Age	<30 days of age
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

Resuscitation
N/A

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%



Clinical Considerations

If neonatal resuscitation is required, initiate cardiac monitoring and pulse oximetry monitoring.

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
SBP ≥90 mmHg

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	Age
	≥2 years to <12 years	≥12 years
	Route	**Route**
	IV	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.

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

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

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

Clinical Considerations

Suspect a Right Ventricular MI in all inferior STEMIs and perform 15-lead ECG to confirm (ST-elevation ≥1mm in V4R). Do not administer nitroglycerin to a patient with Right Ventricular STEMI.

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

Nitroglyercin
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	SBP	
	≥100 mmHg to <140 mmHg	≥140 mmHg	
	IV or Hx*	**IV or Hx***	**IV or Hx***
	Yes	No	Yes
	Route	**Route**	**Route**
	SL	SL	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.

Cardiogenic Shock Medical Directive

A Primary 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

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

Hypoglycemia Medical Directive

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

Indications

Agitation; **OR**

Altered LOA; **OR**

Seizure; **OR**

Symptoms of stroke.

Conditions

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

Glucagon	
Age	N/A
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	
	Route	
	IV	
	Concentration	
	D10W	D50W
Dose	0.2 g/kg (2 ml/kg)	0.5 g/kg (1 ml/kg)
Max. single dose	10 g (100 ml)	25 g (50 ml)
Dosing interval	10 min	10 min
Max. # of doses	2	2

Consider glucagon (if not using dextrose)

	Age	
	N/A	
	Weight	**Weight**
	<25 kg	≥25 kg
	Route	**Route**
	IM	IM
	Concentration	**Concentration**
	N/A	N/A
Dose	0.5 mg	1 mg
Max. single dose	0.5 mg	1 mg
Dosing interval	20 min	20 min
Max. # of doses	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.

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

Contraindications

Salbutamol
Allergy or sensitivity to salbutamol

Epinephrine
Allergy or sensitivity to epinephrine

Treatment

Consider salbutamol

	Weight		Weight	
	<25 kg		≥25 kg	
	Route	**Route**	**Route**	**Route**
	MDI*	NEB	MDI*	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**

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 (if available and authorized)				
	Weight		**Weight**	
	≥25 kg to <50 kg		≥50 kg	
	Route	**Route**	**Route**	**Route**
	IV	IM	IV	IM
Dose	25 mg	25 mg	50 mg	50 mg
Max. single dose	25 mg	25 mg	50 mg	50 mg
Dosing interval	N/A	N/A	N/A	N/A
Max. # of doses	1	1	1	1

Clinical Considerations

Epinephrine should be the 1st medication administered in anaphylaxis.

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

Severe respiratory distress;

AND

Stridor at rest;

AND

Current history of URTI;

AND

Barking cough or recent history of a barking cough.

Conditions

	Epinephrine
Age	<8 years
LOA	N/A
HR	<200 bpm
RR	N/A
SBP	N/A
Other	N/A

Contraindications

Epinephrine
Allergy or sensitivity to epinephrine

Treatment

Consider epinephrine

	Age		Age
	<1 year		≥1 year to <8 years
	Weight	**Weight**	**Weight**
	<5 kg	≥5 kg	N/A
	Route	**Route**	**Route**
	NEB	NEB	NEB
	Concentration	**Concentration**	**Concentration**
	1 mg/mL = 1:1,000	1 mg/mL = 1:1,000	1 mg/mL = 1:1,000
Dose	0.5 mg	2.5 mg	5 mg
Max. single dose	0.5 mg	2.5 mg	5 mg
Dosing interval	N/A	N/A	N/A
Max. # of doses	1	1	1

Clinical Considerations

The minimum initial volume for nebulization is 2.5 ml.

Adult Analgesia Medical Directive

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

Indications

Mild to Moderate Pain (acetaminophen/ibuprofen); **OR**

Mild to Severe Pain (ketorolac)

AND

Isolated hip or extremity trauma; **OR**

Burns; **OR**

Renal colic with prior history; **OR**

Acute musculoskeletal back strain; **OR**

Current history of cancer related pain.

Conditions

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

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

Ketorolac	
Age	≥18 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	Normotension
Other	Restricted to those who are unable to tolerate oral medications

Contraindications

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

Ibuprofen
NSAID or Ibuprofen 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

Ketorolac
NSAID or Ibuprofen 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

Treatment

Consider acetaminophen	
	Route
	PO
Dose	960-1,000 mg
Max. single dose	1,000 mg
Dosing interval	N/A
Max. # of doses	1

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

Consider ketorolac	
	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.

In patients with isolated hip or extremity trauma, ibuprofen and acetaminophen is preferred to ketorolac except where the patient is unable to tolerate oral medications.

If ketorolac is administered, neither acetaminophen nor ibuprofen should be administered.

Suspected renal colic patients should routinely be considered for ketorolac.

Opioid Toxicity Medical Directive

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

Indications

Altered LOC;

AND

Respiratory depression;

AND

Inability to adequately ventilate;

AND

Suspected opioid overdose.

Conditions

	Naloxone
Age	≥12 years
LOA	Altered
HR	N/A
RR	<10 breaths/min
SBP	N/A
Other	N/A

Contraindications

Naloxone
Allergy or sensitivity to naloxone
Uncorrected hypoglycemia

Treatment

Consider naloxone

	Route	Route	Route	Route
	SC	IM	IN	IV
Dose	0.8 mg	0.8 mg	0.8 mg	Up to 0.4 mg
Max. single dose	0.8 mg	0.8 mg	0.8 mg	0.4 mg
Dosing interval	10 min	10 min	10 min	immediate
Max. # of doses	3	3	3	3*

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

Clinical Considerations

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

Naloxone may unmask alternative toxidromes in mixed overdose situations (leading to possible seizures, hypertensive crisis, *etc*.).

Naloxone is shorter acting than most narcotics and these patients are at high risk of having a recurrence of their narcotic effect. Every effort should be made to transport the patient to the closest appropriate receiving facility for ongoing monitoring.

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. If adequate ventilation and oxygenation can be accomplished with a BVM and basic airway management, this is preferred over naloxone administration.

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/caregiver available/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.

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
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

All patients must be transported.

A patient with primary adrenal failure who presents with hypotension should receive hydrocortisone. However, “hypotension” is not a condition that must be present for the patient to receive hydrocortisone.

Endotracheal and Tracheostomy Suctioning 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

Contraindications

Suctioning
N/A

Treatment

Consider suctioning			
	Infant	**Child**	**Adult**
Dose	suction at 60-100 mmHg	suction at 100-120 mmHg	suction at 100-150 mmHg
Max. single dose	N/A	N/A	N/A
Dosing interval	1 minute	1 minute	1 minute
Max. # of doses	5	5	5

Clinical Considerations

Pre-oxygenate with 100% oxygen.

In an alert patient, whenever possible, have patient cough to clear airway prior to suctioning.

Do not exceed 10 seconds of suctioning.

Appendix 2 – ACP Core Medical Directives

2

Appendix 2 – ACP Core Medical Directives

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.

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	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT

AED Defibrillation	
Age	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Defibrillation indicated If not using manual defibrillation

Epinephrine	
Age	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Anaphylaxis suspected as causative event, IM route may be used

Amiodarone	
Age	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT

Lidocaine	
Age	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT where amiodarone is not available

0.9% NaCl Fluid Bolus	
Age	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	PEA Any other rhythm where hypovolemia is suspected

Contraindications

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

Manual Defibrillation
Rhythms other than VF or pulseless VT

AED Defibrillation
Non-shockable rhythm

Epinephrine
Allergy or sensitivity to epinephrine

Amiodarone
Allergy or sensitivity to amiodarone

Lidocaine
Allergy or sensitivity to lidocaine
Use/Availability of amiodarone

0.9% NaCl Fluid Bolus
Fluid overload

Treatment

Consider CPR

Consider supraglottic airway insertion: where more than OPA/NPA and BVM required and without interrupting CPR

Consider Manual defibrillation

	Age	Age
	≥30 days to <8 years	≥8 years
Dose	1 defibrillation	1 defibrillation
Initial dose	2 J/kg	As per BH / manufacturer
Subsequent dose(s)	4 J/kg	As per BH / manufacturer
Dosing interval	2 min	2 min
Max. # of doses	N/A	N/A

Consider AED defibrillation (if not using manual defibrillation)			
	Age		**Age**
	≥30 days to <8 years		≥8 years
	With Pediatric Attenuator Cable	Without Pediatric Attenuator Cable	N/A
	Pediatric	N/A	N/A
Dose	1 defibrillation	1 defibrillation	1 defibrillation
Max. single dose	As per BH / manufacturer	As per BH / manufacturer	As per BH / manufacturer
Dosing interval	2 min	2 min	2 min
Max. # of doses	N/A	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	NA
Max. # of doses	1

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

Consider epinephrine

	Age		Age	
	≥30 days to <12years		≥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 BH
Dose	0.01 mg/kg*	0.1 mg/kg to a max of 2 mg	1 mg	2 mg
Min. single dose	0.1 mg	1 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	Age
	≥30 days to <12 years	≥12 years
	Route	Route
	IV/IO/CVAD	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		Age	
	≥30 days to <12 years		≥12 years	
	Route		Route	
	IV/IO/CVAD	ETT	IV/IO/CVAD	ETT
Dose	1 mg/kg	2 mg/kg	1.5 mg/kg	3 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	Age
	≥30 days to <12 years	≥12 years
	Route	Route
	IV/IO/CVAD	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

Consider intubation (if the airway is not being adequately managed)

Mandatory Provincial Patch Point

Patch to BHP following 3 rounds of epinephrine (or after 3rd analyses if no IV/IO/CVAD/ETT access). If the BH patch fails, transport to the closest appropriate receiving facility following the 4th epinephrine administration (or 4th analysis if no IV/IO/CVAD/ETT access).

Clinical Considerations

Consider very early transport after the 1st analysis (and defibrillation if indicated): in the following settings pregnancy presumed to be ≥20 weeks gestation (fundus above umbilicus, ensure manual displacement of uterus to left), hypothermia, airway obstruction, suspected pulmonary embolus, medication overdose/toxicology, or other known reversible cause of arrest not addressed.

Similarly, plan for extrication and transport for patients with refractory ventricular fibrillation and pediatric cardiac arrest (after 3 analyses), ensure quality CPR can be continued.

In cardiac arrest associated with opioid overdose, continue standard medical cardiac arrest directive. There is no clear role for routine administration of naloxone in confirmed cardiac arrest.

Follow the *Deceased Patient Standard* once TOR has been implemented.

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

If hyperkalemia is suspected as the causative event of the cardiac arrest, consider patching early for calcium gluconate.

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	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VF

AED Defibrillation	
Age	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Defibrillation indicated If not using manual defibrillation

Trauma TOR	
Age	≥16 years
LOA	Altered
HR	0
RR	0
SBP	N/A
Other	No palpable pulses **AND** No defibrillation delivered **AND** Monitored HR = 0 **OR** Monitored HR >0 with the closest ED ≥30 min transport time away.

Contraindications

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

Manual Defibrillation
Rhythms other than VF or pulseless VT

AED Defibrillation
Non-shockable rhythm

Trauma TOR
Age <16 years
Defibrillation delivered
Monitored HR >0 and closest ED <30 min transport time away

Treatment

Consider CPR

Consider Manual defibrillation

	Age	Age
	≥30 days to <8 years	≥8 years
Dose	1 defibrillation	1 defibrillation
Initial dose	2 J/kg	As per BH / manufacturer
Dosing interval	N/A	N/A
Max. # of doses	1	1

Consider AED defibrillation (if not using manual defibrillation)

	Age		Age
	≥30 days to <8 years		≥8 years
	With Pediatric Attenuator Cable	Without Pediatric Attenuator Cable	N/A
Dose	1 defibrillation	1 defibrillation	1 defibrillation
Max. single dose	As per BH / manufacturer	As per BH / manufacturer	As per BH / manufacturer
Max. # of doses	1	1	1

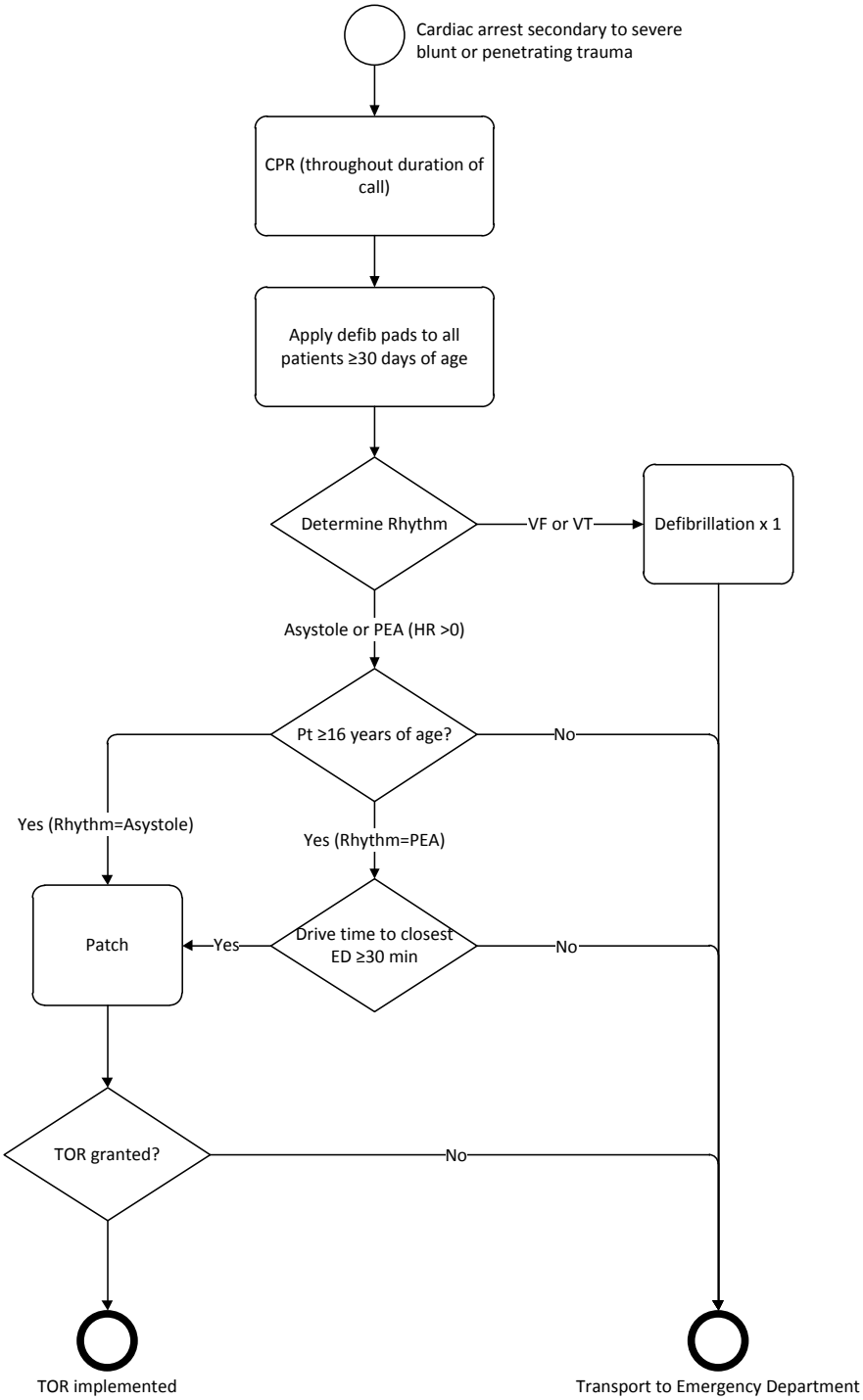
Mandatory Provincial Patch Point

Patch to BHP for authorization to apply the Trauma TOR if applicable. If the BH 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.

Treatment – Algorithm For Trauma Arrest



Hypothermia 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 hypothermia.

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	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT

AED Defibrillation	
Age	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Defibrillation indicated If not using manual defibrillation

Contraindications

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

Manual Defibrillation
Rhythms other than VF or pulseless VT

AED Defibrillation
Non-shockable rhythm

Treatment

Consider CPR

Consider Manual defibrillation

	Age	Age
	≥30 days to <8 years	≥8 years
Dose	1 defibrillation	1 defibrillation
Initial dose	2 J/kg	As per BH / manufacturer
Dosing interval	N/A	N/A
Max. # of doses	1	1

Consider AED defibrillation (if not using manual defibrillation)			
	Age	**Age**	
	≥30 days to <8 years	≥8 years	
	With Pediatric Attenuator Cable	Without Pediatric Attenuator Cable	N/A
Dose	1 defibrillation	1 defibrillation	1 defibrillation
Max. single dose	As per BH / manufacturer	As per BH / manufacturer	As per BH / manufacturer
Dosing Interval	N/A	N/A	N/A
Max. # of doses	1	1	1

Clinical Considerations

Transport to the closest appropriate facility without delay following the 1st analysis.

Foreign Body Airway Obstruction Cardiac Arrest Medical Directive

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

Indications

Cardiac arrest secondary to an airway obstruction.

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	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	VF **OR** pulseless VT

AED Defibrillation	
Age	≥30 days
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	Defibrillation indicated If not using manual defibrillation

Contraindications

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

Manual Defibrillation
Rhythms other than VF or pulseless VT

AED Defibrillation
Non-shockable rhythm

Treatment

Consider CPR

Consider foreign body removal (utilizing BLS PCS maneuvers and/or laryngoscope and Magill forceps)

Consider Manual defibrillation

	Age	Age
	≥30 days to <8 years	≥8 years
Dose	1 defibrillation	1 defibrillation
Initial dose	2 J/kg	As per BH / manufacturer
Dosing interval	N/A	N/A
Max. # of doses	1	1

Consider AED defibrillation (if not using manual defibrillation)			
	Age	**Age**	
	≥30 days to <8 years	≥8 years	
	With Pediatric Attenuator Cable	Without Pediatric Attenuator Cable	N/A
Dose	1 defibrillation	1 defibrillation	1 defibrillation
Max. single dose	As per BH / manufacturer	As per BH / manufacturer	As per BH / manufacturer
Dosing interval	N/A	N/A	N/A
Max. # of doses	1	1	1

Clinical Considerations

If the patient is in cardiac arrest following removal of the obstruction, initiate management as a medical cardiac arrest.

If the obstruction cannot be removed, transport to the closest appropriate facility without delay following the 1st analysis.

Neonatal Resuscitation Medical Directive

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

Indications

Neonatal patient.

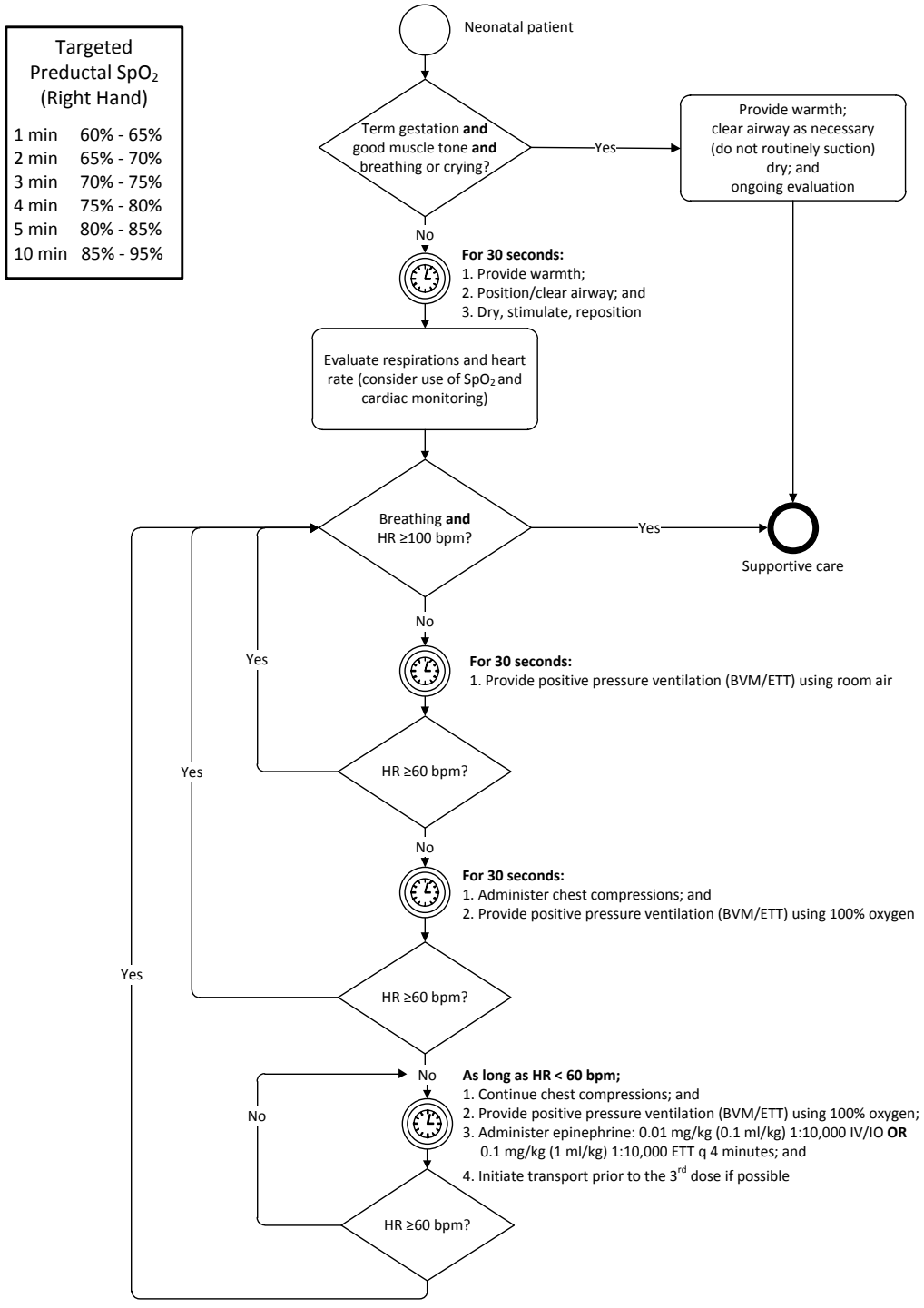
Conditions

	Resuscitation
Age	<30 days of age
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

Resuscitation
N/A

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%
Neonatal 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: 0.01 mg/kg (0.1 ml/kg) 1:10,000 IV/IO OR 0.1 mg/kg (1 ml/kg) 1:10,000 ETT q 4 minutes; and
4. Initiate transport prior to the 3rd dose if possible
HR ≥60 bpm?
No
Yes

Clinical Considerations

If neonatal resuscitation is required, initiate cardiac monitoring and pulse oximetry monitoring.

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
SBP ≥90 mmHg

Dopamine
Allergy or sensitivity to dopamine
Tachydysrhythmias excluding sinus tachycardia
Mechanical shock states
Hypovolemia
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	**Age**
	<12 years	≥12 years
	Route	**Route**
	IV/IO/CVAD	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.

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 (≥7/10 on pain scale)

Contraindications

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

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

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

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 15-lead ECG to confirm (ST-elevation ≥1mm in V4R). Do not administer nitroglycerin to a patient with a Right Ventricular STEMI.

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

Nitroglyercin
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	**SBP**	
	≥100 mmHg to <140 mmHg	≥140 mmHg	
	IV or Hx*	**IV or Hx***	**IV or Hx***
	Yes	No	Yes
	Route	**Route**	**Route**
	SL	SL	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
Fluid overload
SBP ≥90 mmHg

Dopamine
Allergy or sensitivity to dopamine
Tachydysrhythmias excluding sinus tachycardia
Mechanical shock states
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
Hemodynamic stability
Hypothermia
History of heart transplant

Transcutaneous Pacing
Hemodynamic stability
Hypothermia

Dopamine
Allergy or sensitivity to dopamine
Tachydysrhythmias excluding sinus tachycardia
Mechanical shock states
Hypovolemia
Pheochromocytoma

Treatment

Consider Rhythm determination

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

Consider Atropine

	Route
	IV
Dose	0.5 mg
Max. single dose	0.5 mg
Dosing interval	5 min
Max. # of doses	2

Mandatory Provincial Patch Point

Patch to BHP for authorization to proceed with transcutaneous pacing and/or a dopamine infusion.

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

Atropine may be beneficial in the setting of sinus bradycardia, atrial fibrillation, 1st degree AV block, or 2nd degree Type I AV block.

A single dose of atropine should be considered for 2nd degree Type II or 3rd degree AV blocks with fluid bolus while preparing for TCP **OR** if there is a delay in implementing TCP **OR** if TCP is unsuccessful.

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

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

Amiodarone
Allergy or sensitivity to amiodarone

Lidocaine
Allergy or sensitivity to lidocaine

Synchronized Cardioversion
N/A

Treatment

Consider Rhythm determination (confirm regularity)

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

Consider 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 (if available and authorized) 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

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
SBP ≥90 mmHg

Treatment

Consider IV cannulation

Consider 0.9% NaCl maintenance infusion

	Age	Age
	<12 years	≥12 years
	Route	**Route**
	IV/IO/CVAD	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 NaCl bolus to patients <12 years with suspected Diabetic Ketoacidosis (DKA).

Consider 0.9% NaCl fluid bolus

	Age	Age
	<12 years	≥12 years
	Route	**Route**
	IV/IO/CVAD	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 NaCl is lower for patients in cardiogenic shock.**

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 ACP will perform all further IV therapy in accordance with the *Intravenous and Fluid Therapy Medical Directive* once intravenous access is obtained. PCPs authorized for PCP Assist IV are not authorized to administer IV fluid or medication therapy.

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 access is indicated for patients <12 years of age.

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 near-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 or suspected or known replacement / prosthesis proximal to the access site.

Treatment

Consider IO access

Clinical Considerations

N/A

Hypoglycemia Medical Directive

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

Indications

Agitation; **OR**

Altered LOA; **OR**

Seizure; **OR**

Symptoms of stroke.

Conditions

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

Glucagon	
Age	N/A
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 (D10W pre-mixed)		
	Age	**Age**
	<30 days	≥30 days
	Concentration	**Concentration**
	D10W	D10W
	Route	**Route**
	IV	IV
Dose	0.2 g/kg (2 ml/kg)	0.2 g/kg (2ml/kg)
Max. single dose	5 g (50 ml)	10g (100 ml)
Dosing interval	10 min	10 min
Max. # of doses	2	2

Consider dextrose (D50W diluted as required if not using D10W)			
	Age	**Age**	**Age**
	<30 days	≥30 days to <2 years	≥2 years
	Concentration	**Concentration**	**Concentration**
	D10W	D25W	D50W
	Route	**Route**	**Route**
	IV	IV	IV
Dose	0.2 g/kg (2 ml/kg)	0.5 g/kg (2 ml/kg)	0.5 g/kg (1 ml/kg)
Max. single dose	5 g (50 ml)	10 g (40 ml)	25 g (50 ml)
Dosing interval	10 min	10 min	10 min
Max. # of doses	2	2	2

Consider glucagon (if not using dextrose)		
	Weight	**Weight**
	<25 kg	≥25 kg
	Route	**Route**
	IM	IM
Dose	0.5 mg	1 mg
Max. single dose	0.5 mg	1 mg
Dosing interval	20 min	20 min
Max. # of doses	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.

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
Hypoglycemia

Treatment

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

Clinical Considerations

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

Opioid Toxicity Medical Directive

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

Indications

Altered LOC;

AND

Respiratory depression;

AND

Inability to adequately ventilate;

AND

Suspected opioid overdose.

Conditions

	Naloxone
Age	≥12 years
LOA	Altered
HR	N/A
RR	<10 breaths/min
SBP	N/A
Other	N/A

Contraindications

Naloxone
Allergy or sensitivity to naloxone
Uncorrected hypoglycemia

Treatment

Consider naloxone

	Route	Route	Route	Route
	SC	IM	IN	IV
Dose	0.8 mg	0.8 mg	0.8 mg	Up to 0.4 mg
Max. single dose	0.8 mg	0.8 mg	0.8 mg	0.4 mg
Dosing interval	10 min	10 min	10 min	immediate
Max. # of doses	3	3	3	3*

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

Clinical Considerations

Naloxone may unmask alternative toxidromes in mixed overdose situations (leading to possible seizures, hypertensive crisis, *etc*.).

Naloxone is shorter acting than most narcotics and these patients are at high risk of having a recurrence of their narcotic effect. Every effort should be made to transport the patient to the closest appropriate receiving facility for ongoing monitoring.

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. If adequate ventilation and oxygenation can be accomplished with a BVM and basic airway management, this is preferred over naloxone administration.

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

Liodcaine 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

Liodcaine 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 "awake" orotracheal intubation

	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.

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

Contraindications

Salbutamol
Allergy or sensitivity to salbutamol

Epinephrine
Allergy or sensitivity to epinephrine

Treatment

Consider salbutamol

	Weight		Weight	
	<25 kg		≥25 kg	
	Route	**Route**	**Route**	**Route**
	MDI*	NEB	MDI*	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

	Concentration
	1 mg/mL = 1:1,000
	Route
	IM
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**

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	
	Concentration
	1 mg/mL = 1:1,000
	Route
	IM
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 (if available and authorized)				
	Weight		**Weight**	
	≥25 kg to <50 kg		≥50 kg	
	Route	**Route**	**Route**	**Route**
	IV	IM	IV	IM
Dose	25 mg	25 mg	50 mg	50 mg
Max. single dose	25 mg	25 mg	50 mg	50 mg
Dosing interval	N/A	N/A	N/A	N/A
Max. # of doses	1	1	1	1

Clinical Considerations

Epinephrine should be the 1st medication administered in anaphylaxis.

Croup Medical Directive

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

Indications

Severe respiratory distress;

AND

Stridor at rest;

AND

Current history of URTI;

AND

Barking cough or recent history of a barking cough.

Conditions

	Epinephrine
Age	<8 years
LOA	N/A
HR	<200 bpm
RR	N/A
SBP	N/A
Other	N/A

Contraindications

Epinephrine
Allergy or sensitivity to epinephrine

Treatment

Consider epinephrine

	Age		Age
	<1 year		≥1 year to <8 years
	Weight	**Weight**	**Weight**
	<5 kg	≥5 kg	N/A
	Concentration	**Concentration**	**Concentration**
	1 mg/mL = 1:1,000	1 mg/mL = 1:1,000	1 mg/mL = 1:1,000
	Route	**Route**	**Route**
	NEB	NEB	NEB
Dose	0.5 mg	2.5 mg	5 mg
Max. single dose	0.5 mg	2.5 mg	5 mg
Dosing interval	N/A	N/A	N/A
Max. # of doses	1	1	1

Clinical Considerations

The minimum initial volume for nebulization is 2.5 ml.

Tension Pneumothorax Medical Directive

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

Indications

Suspected tension pneumothorax;

AND

Critically ill 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

Mandatory Provincial Patch Point
Patch to BHP for authorization to perform needle thoracostomy.

Consider needle thoracostomy

Clinical Considerations

Needle thoracostomy may only be performed at the 2nd intercostal space in the midclavicular line.

Pediatric Analgesia Medical Directive

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

Indications

Severe pain;

AND

Isolated hip; **OR**

Extremity fractures or dislocations; **OR**

Major burns; **OR**

Current history of cancer related pain.

Conditions

	Morphine
Age	<18 years
LOA	Unaltered
HR	≥60 bpm
RR	N/A
SBP	Normotension
Other	N/A

Contraindications

Morphine
Allergy or sensitivity to morphine
Injury to the head or chest or abdomen or pelvis
SBP drops by one-third or more of its initial value after morphine is administered

Treatment

Mandatory Provincial Patch Point
Patch to BHP for authorization and dosage verification before administering the medication for children <8 years.

Consider morphine	
	Route
	IV/SC
Dose	0.05 mg/kg
Max. single dose	3 mg
Dosing interval	5 min
Max. # of doses	2

Clinical Considerations

N/A

Adult Analgesia Medical Directive

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

Indications

Mild to Moderate Pain (acetaminophen/ibuprofen); **OR**

Mild to Severe Pain (ketorolac); **OR**

Moderate to Severe Pain (Morphine)

AND

Trauma; **OR**

Burns; **OR**

Renal colic with prior history; **OR**

Acute musculoskeletal back strain; **OR**

Current history of cancer related pain.

Conditions

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

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

Ketorolac	
Age	≥18 years
LOA	Unaltered
HR	N/A
RR	N/A
SBP	Normotension
Other	Restricted to those who are unable to tolerate oral medications

Morphine	
Age	≥18 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

Ibuprofen
NSAID or Ibuprofen 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

Ketorolac
NSAID or Ibuprofen 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

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

Treatment

Consider acetaminophen	
	Route
	PO
Dose	960-1,000 mg
Max. single dose	1,000 mg
Dosing interval	N/A
Max. # of doses	1

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

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

Consider morphine	
	Route
	IV/SC
Dose	2-5 mg
Max. single dose	5 mg
Dosing interval	5 min
Max. # of doses	4

Clinical Considerations

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

In patients with isolated hip or extremity trauma, ibuprofen and acetaminophen is preferred to ketorolac except where the patient is unable to tolerate oral medications.

If ketorolac is administered, neither acetaminophen nor ibuprofen should be administered.

Suspected renal colic patients should routinely be considered for ketorolac **and** morphine.

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
Current Digoxin use

Salbutamol
Allergy or sensitivity to salbutamol

Treatment

Consider 12-lead ECG acquisition and interpretation

Mandatory Provincial Patch Point

Patch to BHP for authorization to proceed with calcium gluconate and salbutamol therapies.

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	30 minutes
Max. # of doses	2

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 be 1 presenting with 1 or more of: hypotension, altered levels of awareness, or symptomatic bradycardia.

12-lead acquisition is intended for the patient not in cardiac arrest to establish the QRS duration before and after treatment.

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.

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

If appropriate, refer to the Symptomatic Bradycardia, Tachydysrhythmia, or Cardiac Arrest Medical Directives for further management of these patients.

Sodium bicarbonate is not a very effective agent for hyperkalemia and so should not routinely be administered.

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**.**

Combative Patient Medical Directive

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

Indications

Combative patient.

Conditions

Midazolam	
Age	≥18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	Normotension
Other	No reversible causes (*e.g.*. hypoglycemia, hypoxia, hypotension)

Contraindications

Midazolam
Allergy or sensitivity to midazolam

Treatment

Mandatory Provincial Patch Point
Patch to BHP for authorization to proceed with midazolam if unable to assess the patient for normotension or reversible causes.

Consider midazolam		
	Route	**Route**
	IV	IM
Dose	2.5-5 mg	2.5-5 mg
Max. single dose	5 mg	5 mg
Dosing interval	5 min	5 min
Max. total dose	10 mg	10 mg
Max. # of doses	2	2

Clinical Considerations

N/A

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/caregiver available/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.

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
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

All patients must be transported.

Endotracheal and Tracheostomy Suctioning 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

Contraindications

Suctioning
N/A

Treatment

Consider suctioning			
	Infant	**Child**	**Adult**
Dose	suction at 60-100 mmHg	suction at 100-120 mmHg	suction at 100-150 mmHg
Max. single dose	N/A	N/A	N/A
Dosing interval	1 minute	1 minute	1 minute
Max. # of doses	5	5	5

Clinical Considerations

Pre-oxygenate with 100% oxygen.

In an alert patient, whenever possible, have patient cough to clear airway prior to suctioning.

Do not exceed 10 seconds of suctioning.

Appendix 3 – PCP Auxiliary Medical Directives

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Appendix 3 – PCP Auxiliary Medical Directives

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
SBP ≥90 mmHg

Treatment

Consider IV cannulation

Consider 0.9% NaCl maintenance infusion

	Age	Age
	≥2 years to <12 years	≥12 years
	Route	**Route**
	IV	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 IV NaCl bolus to a patient ≥2 years to <12 years with suspected Diabetic Ketoacidosis (DKA)

Consider 0.9% NaCl fluid bolus

	Age	Age
	≥2 years to <12 years	≥12 years
	Route	**Route**
	IV	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.**

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.

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 BH direction
Titration increment	2.5 cm H_2O	Or equivalent flow rate of device as per BH direction
Titration interval	5 min	
Max. setting	15 cm H_2O	Or equivalent flow rate of device as per BH 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 BH direction
Max. FiO_2	100%

Confirm CPAP pressure by manometer (if available)

Clinical Considerations

N/A

Supraglottic Airway Medical Directive – AUXILIARY

A Primary 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

	Supraglottic Airway
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Patient must be in cardiac arrest

Contraindications

Supraglottic Airway
Active vomiting
Inability to clear the airway
Airway edema
Stridor
Caustic ingestion

Treatment

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

Confirm supraglotttic 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.

Nausea/Vomiting Medical Directive – AUXILIARY

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

Indications

Nausea or vomiting.

Conditions

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

Contraindications

Dimenhydrinate
Allergy or sensitivity to dimenhydrinate or other antihistamines
Overdose on antihistamines or anticholinergics or tricyclic antidepressants

Treatment

Consider dimenhydrinate

	Weight		Weight	
	≥25 kg to <50 kg		≥50 kg	
	Route	**Route**	**Route**	**Route**
	IV	IM	IV	IM
Dose	25 mg	25 mg	50 mg	50 mg
Max. single dose	25 mg	25 mg	50 mg	50 mg
Dosing interval	N/A	N/A	N/A	N/A
Max. # of doses	1	1	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 sterile water. If administered IM do not dilute.

Electronic Control Device Probe Removal Medical Directive – AUXILIARY

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

Indications

Electronic Control Device probe(s) embedded in patient.

Conditions

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

Contraindications

Probe Removal
Probe embedded above the clavicles, in the nipple(s), or in the genital area

Treatment

Consider probe removal

Clinical Considerations

Police may require preservation of the probe(s) for evidentiary purposes.

This directive is for removal of ECD only and in no way constitutes treat and release, normal principles of patient assessment and care apply.

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

Special event: a preplanned gathering with potentially large numbers of people and the Special Event Medical Directives have been preauthorized for use by the Medical Director.

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

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

Special event: a preplanned gathering with potentially large numbers of people and the Special Event Medical Directives have been preauthorized for use by the Medical Director.

Conditions

	Diphenhydramine
Age	≥18 years
LOA	Unaltered
HR	WNL
RR	WNL
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

Special event: a preplanned gathering with potentially large numbers of people and the Special Event Medical Directives have been preauthorized for use by the Medical Director.

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	325-650 mg
Max. single dose	650 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

Special event: a preplanned gathering with potentially large numbers of people and the Special Event Medical Directives have been preauthorized for use by the Medical Director.

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	325-650 mg
Max. single dose	650 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.

Appendix 4 – ACP Auxiliary Medical Directives

Appendix 4 – ACP Auxiliary Medical Directives

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 near 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

Central Venous Access Device Access 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 near arrest state.

Conditions

	CVAD Access
Age	N/A
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Patient has a pre-existing accessible central venous catheter in place

Contraindications

CVAD Access
N/A

Treatment

Consider CVAD access

Clinical Considerations

N/A

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.

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 BH direction
Titration increment	2.5 cm H_2O	Or equivalent flow rate of device as per BH direction
Titration interval	5 min	
Max. setting	15 cm H_2O	Or equivalent flow rate of device as per BH 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 BH direction
Max. FiO_2	100%

Confirm CPAP pressure by manometer (if available)

Clinical Considerations

N/A

Supraglottic Airway 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

	Supraglottic Airway
Age	N/A
LOA	GCS = 3
HR	N/A
RR	N/A
SBP	N/A
Other	Absent gag reflex

Contraindications

Supraglottic Airway
Active vomiting
Inability to clear the airway
Airway edema
Stridor
Caustic ingestion

Treatment

Consider supraglotttic 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.

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 (if available and authorized) 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

Mandatory Provincial Patch Point
Patch to BHP for authorization to perform cricothyrotomy

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.

Nausea/Vomiting Medical Directive – AUXILIARY

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

Indications

Nausea or vomiting.

Conditions

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

Contraindications

Dimenhydrinate
Allergy or sensitivity to dimenhydrinate or other antihistamines
Overdose on antihistamines or anticholinergics or tricyclic antidepressants

Treatment

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

Clinical Considerations

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

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

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

***Non-intubated patients only**

Contraindications

Midazolam
Allergy or sensitivity to midazolam

Treatment

Consider midazolam	
	Route
	IV
Dose	2.5-5 mg
Max. single dose	5 mg
Dosing interval	5 min
Max. total dose	10 mg
Max. # of doses	2

Clinical Considerations

N/A

Electronic Control Device Probe Removal Medical Directive – AUXILIARY

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

Indications

Electronic Control Device probe(s) embedded in patient.

Conditions

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

Contraindications

Probe Removal
Probe embedded above the clavicles, in the nipple(s), or in the genital area

Treatment

Consider probe removal

Clinical Considerations

Police may require preservation of the probe(s) for evidentiary purposes.

This directive is for removal of ECD only and in no way constitutes treat and release, normal principles of patient assessment and care apply.

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

Special event: a preplanned gathering with potentially large numbers of people and the Special Event Medical Directives have been preauthorized for use by the Medical Director.

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

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

Special event: a preplanned gathering with potentially large numbers of people and the Special Event Medical Directives have been preauthorized for use by the Medical Director.

Conditions

	Diphenhydramine
Age	≥18 years
LOA	Unaltered
HR	WNL
RR	WNL
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

Special event: a preplanned gathering with potentially large numbers of people and the Special Event Medical Directives have been preauthorized for use by the Medical Director.

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	325-650 mg
Max. single dose	650 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

Special event: a preplanned gathering with potentially large numbers of people and the Special Event Medical Directives have been preauthorized for use by the Medical Director.

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	325-650 mg
Max. single dose	650 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.

Appendix 5 – Chemical Exposure Medical Directives

5

Appendix 5 – Chemical Exposure Medical Directives

Chemical Exposure Medical Directives

Introduction

The following Medical Directives have been developed for use when chemical exposure to the listed agent is suspected. These Medical Directives may only be used by paramedics who have received special training in treating patients with chemical exposures. This is usually a comprehensive program that includes personal protection and training in CBRNE (Chemical, Biologic, Radiological, Nuclear and Explosive) events.

Hydrofluoric (HF) Acid Exposure Medical Directive

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

Indications

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

AND

Exhibits signs and symptoms of HF poisoning.

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
Allergy or sensitivity to Calcium Gluconate

Topical Anaesthetic Eye Drops
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.

Adult Nerve Agent Exposure Medical Directive

A Paramedic may provide the treatment prescribed in this 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 1 of 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 1 of: 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 1 of 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 1 of: decreased LOA, paralysis, seizure or apnea

Obidoxime	
Age	≥18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis Moderate Exposure: Any 1 of 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 1 of: 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 1 of 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 1 of: decreased LOA, paralysis, seizure or apnea

Contraindications

Atropine
Allergy or sensitivity to atropine

Pralidoxime
Allergy or sensitivity to pralidoxime

Obidoxime
Allergy or sensitivity to obidoxime

Diazepam
Allergy or sensitivity to diazepam

Treatment

Consider Atropine

	Moderate Exposure	Severe Exposure	Moderate Exposure	Severe Exposure	Moderate Exposure	Severe Exposure
	Route	**Route**	**Route**	**Route**	**Route**	**Route**
	IM	IM	Auto-injector	Auto-injector	IV (ACP only)	IV (ACP only)
Initial Dose	2 mg	6 mg	2.1 mg	6.3 mg	2 mg	6 mg
Subsequent doses	2 mg	2 mg	2.1 mg	2.2 mg	2 mg	2 mg
Dosing interval	5 min.	5 min.	5 min.	5 min.	5 min.	5 min.
Max # of doses	N/A	N/A	N/A	N/A	N/A	N/A

Consider Pralidoxime

	Moderate Exposure	Severe Exposure	Moderate Exposure	Severe Exposure
	Route	**Route**	**Route**	**Route**
	IM	IM	Autoinjector	Autoinjector
Dose	600 mg	1,800 mg	600 mg	1,800 mg
Max. single dose	600 mg	1,800 mg	600 mg	1,800 mg
Dosing interval	N/A	N/A	N/A	N/A
Max # of doses	1	1	1	1

Consider Obidoxime (if not using pralidoxime)				
	Moderate Exposure	**Severe Exposure**	**Moderate Exposure**	**Severe Exposure**
	Route	**Route**	**Route**	**Route**
	IM	IM	Autoinjector	Autoinjector
Dose	150 mg	450 mg	150 mg	450 mg
Max. single dose	150 mg	450 mg	150 mg	450 mg
Dosing interval	N/A	N/A	N/A	N/A
Max # of doses	1	1	1	1

Consider Diazepam		
	Moderate Exposure	**Severe Exposure**
	Route	**Route**
	IM	Autoinjector
Dose	10 mg	10 mg
Max. single dose	10 mg	10 mg
Dosing interval	N/A	N/A
Max # of doses	1	1

Clinical Considerations

Only 1 of pralidoxime or obidoxime should be administered.

Administration of IV medications applies to ACPs only.

Do not delay IM administration if IV access is not already established.

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

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

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

Indications

Exposure to a known or suspected nerve agent.

Conditions

Atropine	
Age	<18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis Any 1 of vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath, decreased LOC, paralysis, seizure, apnea or any known liquid exposure

Diazepam	
Age	<18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis Any 1 of vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath, decreased LOC, paralysis, seizure, apnea or any known liquid exposure

Pralidoxime	
Age	<18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis Any 1 of vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath, decreased LOC, paralysis, seizure, apnea or any known liquid exposure

Obidoxime	
Age	<18 years
LOA	N/A
HR	N/A
RR	N/A
SBP	N/A
Other	Suspected cholinergic crisis Any 1 of vomiting, diarrhea, bronchospasm or bronchial secretions, shortness of breath, decreased LOC, paralysis, seizure, apnea or any known liquid exposure

Contraindications

Atropine
Allergy or sensitivity to atropine

Diazepam
Allergy or sensitivity to diazepam

Pralidoxime
Allergy or sensitivity to pralidoxime

Obidoxime
Allergy or sensitivity to obidoxime

Treatment

Consider Atropine

	Weight	Weight	Weight	Weight
	<10 kg	<10 kg	≥10 kg to <40 kg	≥10 kg to <40 kg
	Route	**Route**	**Route**	**Route**
	IV (ACP only)	IM	IV (ACP only)	IM
Dose	0.5 mg	0.5 mg	1 mg	1 mg
Max. single dose	0.5 mg	0.5 mg	1 mg	1 mg
Dosing interval	5 min.	5 min.	5 min.	5 min.
Max. # of doses	N/A	N/A	N/A	N/A

Consider Diazepam

	Weight	Weight	Weight	Weight
	<10 kg	<10 kg	≥10 kg to <40 kg	≥10 kg to <40 kg
	Route	**Route**	**Route**	**Route**
	IV (ACP only)	IM	IV (ACP only)	IM
Dose	2 mg	2 mg	0.2 mg/kg	0.2 mg/kg
Max. single dose	2 mg	2 mg	8 mg	8 mg
Dosing interval	N/A	N/A	N/A	N/A
Max. # of doses	1	1	1	1

Consider Pralidoxime				
	Weight	**Weight**	**Weight**	**Weight**
	<10 kg	<10 kg	≥10 kg to <40 kg	≥10 kg to <40 kg
	Route	**Route**	**Route**	**Route**
	IV (ACP only)	IM	IV (ACP only)	IM
Dose	15 mg/kg	15 mg/kg	15 mg/kg	15 mg/kg
Max. single dose	150 mg	150 mg	600 mg	600 mg
Dosing interval	60 min.	60 min.	60 min.	60 min.
Max. # of doses	2	2	2	2

Consider Obidoxime (if not using pralidoxime)				
	Weight	**Weight**	**Weight**	**Weight**
	<10 kg	<10 kg	≥10 kg to <40 kg	≥10 kg to <40 kg
	Route	**Route**	**Route**	**Route**
	IV (ACP only)	IM	IV (ACP only)	IM
Dose	8 mg/kg	8 mg/kg	8 mg/kg	8 mg/kg
Max. single dose	80 mg	80 mg	320 mg	320 mg
Dosing interval	N/A	N/A	N/A	N/A
Max. # of doses	1	1	1	1

Clinical Considerations

Only 1 of pralidoxime or obidoxime should be administered.

Administration of IV medications applies to ACPs only

Do not delay IM administration if IV access is not already established.

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

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.

Cyanide Exposure Medical Directive

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

Indications

Suspected exposure to cyanide with signs and symptoms of poisoning.

Conditions

Sodium Thiosulfate 25%	
Age	N/A
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Hydroxocobalamin	
Age	N/A
LOA	Altered
HR	N/A
RR	N/A
SBP	N/A
Other	N/A

Contraindications

Sodium Thiosulfate 25%
Allergy or sensitivity to Sodium Thiosulfate 25%

Hydroxocobalamin
Allergy or sensitivity to Hydroxocobalamin

Treatment

Consider sodium thiosulfate 25%		
	Age	**Age**
	<18 years	≥18 years
	Route	**Route**
	IV infusion	IV infusion
Dose	1.65 ml/kg	12.5g (50 ml of 25% solution)
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

Consider hydroxocobalamin (if not using sodium thiosulfate 25%)		
	Age	**Age**
	<18 years	≥18 years
	Route	**Route**
	IV infusion	IV infusion
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

	Dose	Concentration	Volume of Administration
5	70 mg/kg	25 mg/ml	14 ml
10	70 mg/kg	25 mg/ml	28 ml
15	70 mg/kg	25 mg/ml	42 ml
20	70 mg/kg	25 mg/ml	56 ml
25	70 mg/kg	25 mg/ml	70 ml
30	70 mg/kg	25 mg/ml	84 ml
35	70 mg/kg	25 mg/ml	98 ml
40	70 mg/kg	25 mg/ml	112 ml
>40 kg	5 g	25 mg/ml	200 ml

Symptomatic Riot Agent Exposure Medical Directive

A Paramedic may provide the treatment prescribed in this 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.

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Appendix 6 – Certification Standard

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Appendix 6 – 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 Services Branch (EHSB) of the Ministry of Health and Long-Term Care (MOHLTC);

"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;

"Medical Director"

means a physician designated by a RBH as the Medical Director of the RBHP;

"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 MOHLTC;

"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 (RBH)"

means a base hospital as defined in subsection 1(1) of the *Ambulance Act*, and provides an RBHP pursuant to an agreement entered into with the MOHLTC;

"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 EHSB of the MOHLTC, 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.

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.

[1] See New Certification process

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 immediately notify the Paramedic and Employer of the Patient Care Concern and provide notice in writing as soon as possible. The notice in writing 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 immediately notify the Paramedic, Employer, the Senior Field Manager and all other RBHPs of a Deactivation. The Medical Director shall provide a brief written reason for the Deactivation to the Paramedic, Employer, the Senior Field Manager and all other RHBPs as soon as possible.

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: (i) a PPRC has been convened and has provided its written recommendations to the Medical Director and the Paramedic; or (ii) the Paramedic has waived the PPRC process in writing.

The Medical Director shall immediately notify the Paramedic, Employer, the Senior Field Manager and all other RBHPs of his or her decision to either proceed with Reactivation or Decertification of the Paramedic. Where the Medical Director proceeds with Decertification, he or she shall provide a written explanation to the Paramedic, outlining the reasons for Decertification. The Medical Director shall provide a brief written explanation confirming the reason for the Decertification to the Employer, the Senior Field Manager and all other RHBPs 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.

[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

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.

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.

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.

[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.

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 times lines 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.

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