2005 PROTOCOL UPDATE SUMMARY				
MARYLAND MEDICAL PROTOCOLS FOR EMS PROVIDERS				
Two format changes were made throughout the entire document:				
The acronym for subcutaneous was changed from SQ to SC.				
All trailing zeros were eliminated from medication doses.				
PROTOCOL TITLE	**PAGE #**	**LINE #**	**ORIGINAL**	**NEW INFORMATION**
Inside Cover Page			Effective January 1, 2004.	Changed to "Effective July 1, 2005."
To All Health Care Providers in the State of Maryland	iii		New	A new letter to the providers has been inserted.
Table of Contents	v-x			Due to changes throughout the document the complete Table of Contents has been revised.
General Patient Care	27	ALERT	Never Withhold Oxygen From A Patient In Respiratory Distress!	The symbol was aligned with the ALERT text.
General Patient Care	27	4.a)(1)(a), (ii) & (b)	The criteria for when to begin CPR is 80 bpm.	The pulse rate used as criteria for when to begin CPR has been changed from 80 bpm to 60 bpm.
General Patient Care	27	4.a)(2)	Patients greater than 1 year but who have not reached their 15th birthday:	The age criteria has been changed to meet the American Heart Association CPR Guidelines. The text now reads: "Patients greater than 1 year but who have not reached their 8th birthday:"
General Patient Care	28	(3)	Patients 8 years of age or greater:	The minimum age for the use of AEDs was lowered. It now reads: "Patients greater than 1 year of age: If pulse is absent, use AED if available or begin CPR or (ALS Symbol) use manual defibrillator."
General Patient Care	28	(3)	If pulse is absent, begin CPR and use AED or	The order of the text was changed; if an AED is available, it should be used prior to initiating CPR.
General Patient Care	31	2	New	A reference was added to prompt the provider to seek written emergency information forms. The text reads: "Collect and transport documentation related to patient's history (example: Emergency Information Form, Medic Alert, EMS DNR, or jurisdictional form).
General Patient Care	32	1.a)	Spelling "closet".	Spelling was changed to "closest".

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General Patient Care	33	ALERT	New	"All Requests For Scene Helicopter Transports Shall Be Made Through SYSCOM" was added.
General Patient Care	33	(3)	Head Injury Patients: Indications as per head injury protocol.	The reference to head injury patients has been removed. There is no specific head injury protocol.
General Patient Care	33	(3) & (5)	Outline numbers (3), (4), and (5).	The outline was corrected.
Altered Mental Status: Seizures	37	e)	2.5 mg increments slow IVP	IM administration of diazepam has been added. IM administration of diazepam requires medical consultation. A reference for severe nerve agent exposure has also been added. If severe nerve agent exposure is suspected, providers may administer diazepam without medical consultation.
Altered Mental Status: Seizures	38	l)	Rectal dose: Administer up to 0.5 mg/kg, maximum total dose 20 mg	Up to 0.2 mg/kg rectal, Maximum total dose 10 mg
Altered Mental Status: Seizures	38	l)	0.10 mg/kg SLOW IVP/IO	IM administration of diazepam has been added. IM administration of diazepam requires medical consultation. A reference for severe nerve agent exposure has also been added. If severe nerve agent exposure is suspected, providers may administer diazepam without medical consultation.
Altered Mental Status: Unresponsive Person	39	e)	Administer Naloxone, 0.4 - 2 mg SLOW IVP/ET/IM	Intranasal was added to the list of administration routes.
Altered Mental Status: Unresponsive Person (Continued)	40	k)(1)	…administer a fluid challenge of 20 ml/kg LR IV/IO.	…administer a fluid bolus of 20 ml/kg LR IV/IO. The term "fluid challenge" was changed to "fluid bolus" and a reference was added for Volume Sensitive Children. The new text reads, "For volume sensitive children administer initial fluid bolus of 10 ml/kg LR IV/IO. If patient's condition does not improve, administer the second bolus of fluid at 10 ml/kg LR IV/IO. Volume sensitive children include: neonates (0-28 days), children with congenital heart disease, chronic lung disease, or chronic renal failure."
Altered Mental Status: Unresponsive Person (Continued)	40	m)	Administer Naloxone, 0.4 - 2 mg SLOW IVP/IO/IM	Intranasal was added to the list of administration routes.

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Apparent Life-Threatening Event (ALTE)	41		New Protocol	The entire protocol is new.
Apparent Life-Threatening Event (ALTE) (Continued)	42		New Protocol	The entire protocol is new.
Universial Algorithm for Adult Emergency Cardiac Care for BLS	46	Algorithm	Begin CPR or Attach AED	The order of the text was changed to "Attach AED or Begin CPR." If AED is available it should be used prior to initiating CPR.
Universal Algorithm for Adult Emergency Cardiac Care for ALS	47	Algorithm	"Arrhythmia"	"Arrhythmia" was changed to "Dysrhythmia".
Universal Algorithm for Pediatric Emergency Cardiac Care for BLS	48	Algorithm	New	The entire algorithm is new.
Universal Algorithm for Pediatric Emergency Cardiac Care for ALS	49	Algorithm	New	The entire algorithm is new.
Pediatric Bradycardia Algorithm	52	Ventilated Box	Ventilate Oxygen 90-100%	A rate was added to the ventilation box. It now reads "BVM ventilations at 20-30 breaths/min".
Pediatric Bradycardia Algorithm	52	Algorithm	Pulse is less than 80 in an infant.	The pulse rate for an infant and child was made the same. The new text reads: "Pulse less than 60 BPM in infant or child."
Pediatric Bradycardia Algorithm	52	Possible Causes Box	New	The "Possible Causes of Bradycardia" box was added with the appropriate footnotes to the algorithm.
Pediatric Bradycardia Algorithm	52	b-e	Footnotes	Footnotes c-e were added as a reference to possible causes.
Pediatric Asystole & Pulseless Arrest Algorithm	55	Algorithm	Epinephrine (2nd & Subsequent Doses) 0.1 mg/kg (1:10,000) IV/IO/ET (b) Repeat every 3-5 minutes	This box was removed from the algorithm under both the VF/Pulseless VT and Asystole branches. The subsequent dosing information was added to another box.
Pediatric Asystole & Pulseless Arrest Algorithm	55	b-e	Footnotes	Footnotes b and e were modified to include appropriate dosing and volume for neonates.
Cardiac Emergencies: Chest Pain	58	ALERT	Nitroglycerin Is Contraindicated For Any Patient Having Taken Viagra Within The Last 24 Hours.	Nitroglycerin Is Contraindicated For Any Patient Having Taken Medication For Erectile Dysfunction (eg. Viagra, Cialis, or Levitra) Within The Past 48 hours. Medical Consultation Is Required To Override This Contraindication.

PROTOCOL TITLE	PAGE #	LINE #	ORIGINAL	NEW INFORMATION
Cardiac Emergencies: Chest Pain	59	l)	Paramedic may perform without consult.	"Paramedic may perform without consult" was removed from line l). For patients complaining of chest pain, a provider must consult prior to administering Morphine.
Cardiac Emergencies: Hyperkalemia	61	m)	Administer calcium chloride 0.2 ml/kg IV/IO or 20 mg/kg IV/IO.	"Maximum dose 1 gram or 10 ml" was added for calcium chloride administration.
Newly Born Protocol	62		New Protocol	This entire protocol is new and replaces the "Newborn Resuscitation - Birth to 28 Days Old" and the "Newborn Resuscitation: Bradycardia (Pulse Rate Less than 80 BPM)" protocols.
Sudden Infant Death Syndrome (SIDS)	68	ALERT	"Dependent Lividity And Rigor Mortis May Be Present (See Presumed Dead On Arrival Protocol).	This section was added and moved up to create a second alert on this page immediately following a). Also, "dependent lividity" was removed as a criteria for Presumed Dead On Arrival.
Sudden Infant Death Syndrome (SIDS)	68		Perform an initial assessment, assign a treatment priority, and perform CPR.	"If Indicated " was added to this section. The provider should only conduct an assessment and perform CPR if appropriate.
Sudden Infant Death Syndrome (SIDS)	68	ALERT	Dependent Lividity was removed.	"Dependent lividity" was removed as a criteria for Presumed Dead On Arrival.
Environmental Emergencies: Cold Emergencies (Frostbite) (Continued)	76	l)	Consider Morphine Sulfate 0.1 mg/kg IV/IM/IO Administer 1-2 mg/min	The dosage and routes for the administration of Morphine Sulfate to pediatric patients have been standardized. "Consider Morphine Sulfate 0.1 mg/kg slow IV/IM/IO Administer 1-2 mg/min Maximum dose 5 mg".
Hyperbaric Therapy Protocol	85	3. a)	Patients who have had a loss of consciousness or altered mental status secondary to suspected carbon monoxide exposure and who may or may not have minor burns.	This section has been reworded to include signs and symptoms. It now reads: "Patients who have had a loss of consciousness, nausea, vomiting, diarrhea, altered mental status, abnormal skin color, dyspnea or seizures secondary to suspected carbon monoxide or toxic exposure and who may or may not have minor burns."

PROTOCOL TITLE	PAGE #	LINE #	ORIGINAL	NEW INFORMATION
Hyperbaric Therapy Protocol	85	3. b)	Isolated suspected inhalation injury with suspicion of carbon monoxide or toxic inhalation (assess airway for direct thermal injury as noted by singed eyebrows or nasal hairs, facial burns, and soot in mouth). These patients may need emergent airway management.	The reference to airway thermal injuries has been removed. This section now reads: "Isolated suspected inhalation injury with suspicion of carbon monoxide or toxic inhalation."
Hypertensive Crisis				The entire protocol has been deleted.
Non-Traumatic Shock: Hypoperfusion (Continued)	88	f)	The pediatric patient may present hemodynamically unstable with hypoprofusion evidenced by altered mental status, delayed capillary refill greater than 2 seconds, pallor, peripheral cyanosis, hypotension. Hypotension is defined as a systolic blood pressure that is less than the total of 70 plus twice the child's age in years [70 + (2 x years) = systolic BP].	The criteria of Hypotension was altered. This section now reads: "The pediatric patient may present hemodynamically unstable or with hypoprofusion evidenced by altered mental status, delayed capillary refill greater than 2 seconds, pallor, peripheral cyanosis, hypotension. Hypotension is defined as a systolic blood pressure less than 60 in neonates, less than 70 in infants, less than [70 + (2 x years) = systolic BP]."
Obstetrical/Gynecological Emergencies: Childbirth Algorithm	89	Algorithm	Continued on page 85.	The reference was changed to "(Continued on page 90."
Obstetrical/Gynecological Emergencies: Childbirth Algorithm	90	Algorithm	GO TO NEWBORN RESUSCITATION	The reference was changed to "GO TO NEWLY BORN PROTOCOL" since this protocol replaced Newborn Resuscitation.
Obstetrical/Gynecological Emergencies: Vaginal Bleeding	91	f)	Corrected typographical error.	Initiate IV LR fluid therapy 20 ml/kg bolus.
Overdose/Poisoning: Ingestion	94	b)	Consider syrup of ipecac 30 ml PO OR Consider activated charcoal with or without Sorbitol 1.0 gram/kg PO.	The administration of syrup of ipecac was deleted from this protocol. Activated charcoal should only be administered without Sorbitol. Line b) now reads "Consider activated charcoal **without** Sorbitol 1.0 gram/kg PO."
Overdose/Poisoning: Ingestion	94	d)	Consider syrup of ipecac 30 ml PO OR Consider activated charcoal with or without Sorbitol 1.0 gram/kg PO.	The administration of syrup of ipecac was deleted from this protocol. Activated charcoal should only be administered **without** Sorbitol. Line d) now reads "Consider activated charcoal without Sorbitol 1.0 gram/kg PO."

PROTOCOL TITLE	PAGE #	LINE #	ORIGINAL	NEW INFORMATION
Overdose/Poisoning: Ingestion	95	m)	Consider syrup of ipecac 30 ml PO OR Consider activated charcoal with or without Sorbitol 1.0 gram/kg PO.	The administration of syrup of ipecac was deleted from this protocol. Activated charcoal should only be administered **without** Sorbitol. Line m) now reads "Consider activated charcoal without Sorbitol 1.0 gram/kg PO."
Overdose/Poisoning: Ingestion	95	o)	Consider syrup of ipecac 30 ml PO OR Consider activated charcoal with or without Sorbitol 1.0 gram/kg PO.	The administration of syrup of ipecac was deleted from this protocol. Activated charcoal should only be administered without Sorbitol. Line o) now reads "Consider activated charcoal **without** Sorbitol 1.0 gram/kg PO."
Overdose/Poisoning: Ingestion	95	m) & o)	Activated Charcoal 1.0 gram/kg PO.	Lines n) & q) were reformatted.
Overdose/Poisoning: Inhalation	97	ALERT	Patients With Suspected Carbon Monoxide Inhalation Without Major Burns Should Be Considered For Transport To The Hyperbaric Specialty Center. Patients In Closed Space Incidents Are More Likely To Experience Carbon Monoxide Inhalation And May Manifest Toxicity With Altered Mental Status.	A reference was added for toxic exposure. The new alert reads: "Patients With Suspected Carbon Monoxide Or Toxic Inhalation Without Major Burns Should Be Considered For Transport To The Hyperbaric Specialty Center. Patients In Closed Space Incidents Are More Likely To Experience Carbon Monoxide Or Toxic Inhalation And May Manifest Toxicity With Altered Mental Status."
Overdose/Poisoning; Injection	100	q)	Consider PASG	The use of PASG was removed from this protocol for pediatric patients.
Pain Management	101		New	The entire protocol is new.
Pain Management	102		New	The entire protocol is new.
Respiratory Distress: Allergic Reaction/Anaphylaxis	103	d)(1)	Administer epinephrine 1:1000; 0.3 mg SC, May repeat every 5 minutes for a total of 3 doses for severe reactions	"Additional doses of epinephrine require medical consultation" has been added to this section.
Respiratory Distress: Allergic Reaction/Anaphylaxis	103	d)(3)	Administer diphenhydramine, 25 mg IVP or IM	The dose/administration of diphenhydramine was changed to: "Administer diphenhydramine, 25 mg slow IVP or IM. Additional doses of diphenhydramine require medical consultation."
Respiratory Distress: Allergic Reaction/Anaphylaxis	104	f)(1)	Consider diphenhydramine, 25 mg IVP or IM	The dose/administration of diphenhydramine was changed to: Consider diphenhydramine, 25 mg slow IVP or IM.
Respiratory Distress: Allergic Reaction/Anaphylaxis	104	(j)(1)	Administer epinephrine 1:1000; 0.3 mg SC, May repeat every 5 minutes for a total of 3 doses for severe reactions	"Additional doses of epinephrine require medical consultation" has been added to this section.

PROTOCOL TITLE	PAGE #	LINE #	ORIGINAL	NEW INFORMATION
Respiratory Distress: Allergic Reaction/Anaphylaxis	105	(4)	Administer diphenhydramine, 25 mg IVP or IM	The dose/administration of diphenhydramine was changed to: "Administer diphenhydramine, 1 mg/kg slow IVP/IO or IM. Maximum single dose 25 mg. Additional doses of diphenhydramine require medical consultation."
Respiratory Distress: Allergic Reaction/Anaphylaxis (Continued)	105	(5)	Administer a combination of albuterol/atrovent via nebulizer: For an infant less than 1 year of age, contraindicated. For a child 1 year of age or greater, but less than 2 years of age, administer albuterol 1.25 mg and atrovent 250 mcg. For a patient 2 years of age or greater, administer albuterol 2.5 mg and atrovent 500 mcg.	The medication for an infant less than 1 year of age was clarified. The new text reads, "Administer a combination of albuterol/atrovent via nebulizer: For an infant less than 1 year of age, administer albuterol 1.25 mg via nebulizer; atrovent is contraindicated." The remaining age groups were unchanged.
Respiratory Distress: Asthma/COPD (Continued)	107	(l)	Medical consultation is required if the child has a cardiac history.	This section was removed from (l) and made an Alert.
Respiratory Distress: Asthma/COPD (Continued)	107	o)	Administer a combination of albuterol/atrovent via nebulizer: For an infant less than 1 year of age, contraindicated. For a child 1 year of age or greater, but less than 2 years of age, administer albuterol 1.25 mg and atrovent 250 mcg. For a patient 2 years of age or greater, administer albuterol 2.5 mg and atrovent 500 mcg.	The medication for an infant less than 1 year of age was clarified. The new text reads: "Administer a combination of albuterol/atrovent via nebulizer: For an infant less than 1 year of age, administer albuterol 1.25 mg via nebulizer; atrovent is contraindicated. " The remaining age groups were unchanged.
Respiratory Distress Croup	109	e)	(Note: if inhaled normal saline decreases the patient's level of distress and symptoms, continue this therapy en route to the appropriate receiving facility.)	(Note: if inhaled normal saline decreases the patient's level of distress and symptoms, continue this therapy en route to the appropriate receiving facility.) This reference was moved to d).
Respiratory Distress Croup	109	f)	… of epinephrine 1:1,000 SQ (max dose of 0.3 mg)	SQ was changed to SC.
Respiratory Distress: Pulmonary Edema/Congestive Heart Failure	110	b)	Medical Consultation Symbol	The medical consult symbol was removed. A CRT-I or paramedic may administer CPAP without medical consultation if their jurisdiction participates in the CPAP Optional Supplemental Program.

PROTOCOL TITLE	PAGE #	LINE #	ORIGINAL	NEW INFORMATION
Stroke: Neurological Emergencies	112	d)	If the patient is a candidate for fibrinolytic therapy AND symptoms have been present for less than 2 hours at the time of EMS arrival, transport the patient to the closest Designated Stroke Center. If there is not one within 30 minutes, then go to the nearest hospital.	This section was revised to ensure the patient reaches the hospital within two hours of onset of symptoms. "If the patient is a candidate for fibrinolytic therapy AND can be delivered to the hospital within 2 hours of sign/symptom onset, transport the patient to the closest Designated Stroke Center. If there is not one within 30 minutes, then go to the nearest hospital."
Stroke: Neurological Emergencies	113	Checklist	Time of symptom onset less than 120 minutes prior to EMS arrival.	The criteria has been changed to reflect the 120 minutes to arrival at hospital. The new criteria is: "Patient can be delivered to a Stroke Center within 2 hours of sign/symptom onset."
Trauma Protocol: Burns	114	2.b)(2)	Electrical burns (including lightning)	Electrical burns, including lightning or contact with high voltage (200 volts or greater).
Trauma Protocol: Burns	114	ALERT	Patients With Suspected Carbon Monoxide Inhalation Without Major Burns Should Be Considered For Transport To The Hyperbaric Specialty Center. Patients In Closed Space Incidents Are More Likely To Experience Carbon Monoxide Inhalation And May Manifest Toxicity With Altered Mental Status.	A reference was added for toxic exposure. The new alert reads: "Patients With Suspected Carbon Monoxide Or Toxic Inhalation Without Major Burns Should Be Considered For Transport To The Hyperbaric Specialty Center. Patients In Closed Space Incidents Are More Likely To Experience Carbon Monoxide Or Toxic Inhalation And May Manifest Toxicity With Altered Mental Status."
Trauma Protocol: Burns (Continued)	115	ALERT	Do Not Place Ice On Any Burn Greater Than 5%.	The reference was changed to: "Do Not Place Ice On Any Patient With Burns Greater Than 5% Total Body Surface Area."
Trauma Protocol: Burns (Continued)	115	l)	Consider morphine sulfate, 0.1 mg/kg slow IV/IO/IM, Administer 1-2 mg/min	Consider morphine sulfate, 0.1 mg/kg slow IV/IO/IM, Administer 1-2 mg/min. "Maximum dose 5 mg" was added to this section.
Trauma Protocol: Eye Trauma (Continued)	117	l)	Consider morphine sulfate, 0.1 mg/kg slow IV/IO/IM, Administer 1-2 mg/min	Consider morphine sulfate, 0.1 mg/kg slow IV/IO/IM, Administer 1-2 mg/min. "Maximum dose 5 mg" was added to this section.
Trauma Protocol: Hand/Extremity Trauma (Continued)	119	j)	Consider morphine sulfate, 0.1 mg/kg slow IV/IO/IM, Administer 1-2 mg/min	Consider morphine sulfate, 0.1 mg/kg slow IV/IO/IM, Administer 1-2 mg/min. "Maximum dose 5 mg" was added to this section.

PROTOCOL TITLE	PAGE #	LINE #	ORIGINAL	NEW INFORMATION
Trauma Protocol: Multiple/Severe Trauma	120	d)	Hyperventilate the head-injured patient (infant rate of 35, child and adult rate of 25 breaths per minute): (1) Who has signs of herniation such as unequal pupils, posturing, or paralysis, (2) Who is manifesting a rapidly decreasing GCS or, (3) With on-line medical consultation.	This section was corrected to match GPC. It now reads, "Hyperventilate the head-injuried patient as follows: Adult 20 breaths per minute, Child 30 breaths per minute, Infant 35 breaths per minute (1) Who has signs of herniation such as unequal pupils, posturing, or paralysis (2) Who is manifesting a rapidly decreasing GCS or, (3) With on-line medical consultation."
Trauma Protocol: Multiple/Severe Trauma	121	i)	PASG removed	The use of PASG was removed from this protocol for pediatric patients.
Trauma Protocol: Multiple/Severe Trauma	121	k)	If age related vital signs …	The reference for Volume Sensitive Children has been added: "OR, For volume sensitive children administer initial fluid bolus of 10 ml/kg LR IV/IO. If patient's condition does not improve, administer the second bolus of fluid at 10 ml/kg LR IV/IO. Volume sensitive children include: neonates (0-28 days), children with congenital heart disease, chronic lung disease, or chronic renal failure."
Trauma Protocol: Spinal Cord Injury	125	l) & p)	PASG removed	The use of PASG was removed from this protocol for pediatric patients.
Trauma Protocol: Multiple/Severe Trauma	125	m)	If age related vital signs …	The reference for Volume Sensitive Children has been added: "OR, For volume sensitive children administer initial fluid bolus of 10 ml/kg LR IV/IO. If patient's condition does not improve, administer the second bolus of fluid at 10 ml/kg LR IV/IO. Volume sensitive children include: neonates (0-28 days), children with congenital heart disease, chronic lung disease, or chronic renal failure."
Trauma Protocol: Trauma Arrest	127	o) & s)	PASG removed	The use of PASG was removed from this protocol for pediatric patients.

PROTOCOL TITLE	PAGE #	LINE #	ORIGINAL	NEW INFORMATION
A. Glossary	133		New definitions added.	New definitions were added for the following: Apnea, Children with Special Healthcare Needs (CSHN), Emergency Information Form, Erythema, Fluid Bolus, Fluid Challenge, Neonatal, Newly Born, Optional Supplemental Program, Pallor, Pilot Program, Volume Sensitive Children.
Procedures, Medical Devices, and Medications for EMS and Commercial Services	140	Chart	SQ, IM, IV, ET, Rectal, Nebulizer, Intranasal	SQ was changed to SC.
Procedures, Medical Devices, and Medications for EMS and Commercial Services (Continued)	141	Chart	Peak Expiratory Flow Meter	Peak Expiratory Flow Meter was added to the chart and is Standing Order (SO) for the CRT, CRT-I, EMT-P.
Procedures, Medical Devices, and Medications for EMS and Commercial Services (Continued)	142	Chart	Activated Charcoal (With or Without Sorbitol)	"With" was removed. Activated Charcoal should only be administered without Sorbitol.
Procedures, Medical Devices, and Medications for EMS and Commercial Services (Continued)	142	Chart		Etomidate (Amidate) was added for the Rapid Sequence Intubation (RSI) Pilot Program.
Procedures, Medical Devices, and Medications for EMS and Commercial Services (Continued)	142	Chart		Ipecac was deleted.
Rule of Nines	144	Title	Normal Vital Signs and Chart	The title of this page was changed to "Rule of Nines" and the normal vital signs chart was moved to the next page with the APGAR chart.
Normal Vital Signs and Chart	145		APGAR Chart	The APGAR chart was moved here from page 60.
Airway Management: Bag Valve Mask Ventilation	161	b)(3), (3)(a),(3)(b)	Bradycardia	Symptomatic Bradycardia (a) Infant heart rate less than 100; (b) Child heart rate less than 80)
Equipment Sizes Chart	171	ALERT	Consult Braslow Tape If Available.	Use A Length-Based Tape If Available.
Airway Management: Tracheostomy Change	172		New Protocol	The entire protocol is new.
Airway Management: Tracheostomy Suctioning	174		New Protocol	The entire protocol is new.

PROTOCOL TITLE	PAGE #	LINE #	ORIGINAL	NEW INFORMATION
Hypoperfusion Adjunct: PASG Pneumatic Antishock Garment [a.k.a. MAST]	182	(3)	Pediatric Trauma	The use of PASG for pediatric patients was removed from this procedure.
Hypoperfusion Adjunct: PASG Pneumatic Antishock Garment [a.k.a. MAST]	182	c)(6)	Contraindications	"Children less than 15 years of age" was added as a contraindication.
Peripheral IV Access for CRT, CRT-(I), & EMT-P, and IV Access Option for EMT-B Approved by the EMS Operational Program	192	(7)	New	The ALS provider may establish a peripheral IV in a patient whose vasoactive medication has been interrupted due to a malfunctioning long-term access device that cannot be repaired by the home health caregiver. The ALS provider can assist in reestablishment of an existing vasoactive infusion at the same dose or setting. Patient shall be transported to the nearest appropriate facility to access patient's long-term device. When in doubt, obtain medical consultation.
Peripheral IV Access for CRT, CRT-(I), & EMT-P, and IV Access Option for EMT-B Approved by the EMS Operational Program	192	(8), (9)		The outline was corrected.
1. Activated Charcoal (without Sorbitol)	199	Title		Activated charcoal should only be administered without Sorbitol.
3. Epinephrine Auto-injector	201	c)	Unless in severe allergic reaction or severe asthma, medical consultation should be obtained before administering to pregnant patients.	Unless in severe allergic reaction or severe asthma, medical consultation should be obtained before administering to pregnant or cardiac patients.
4. Ipecac	201			The entire reference has been removed. Ipecac is no longer in the Maryland Medical Protocols for EMS Providers.
Nitroglycerin	202	d)(5)	Viagra, Cialis, or Levitra ingestion within the last 24 hours	Nitroglycerin Is Contraindicated For Any Patient Having Taken Medication For Erectile Dysfunction (eg. Viagra, Cialis, or Levitra) Within The Past 48 hours. Medical Consultation Is Required To Override This Contraindication.
Activated Charcoal (without Sorbitol)	205	Title		Activated charcoal should only be administered without Sorbitol.

PROTOCOL TITLE	PAGE #	LINE #	ORIGINAL	NEW INFORMATION
Activated Charcoal (without Sorbitol)	205	g)(1) & (2)	Adult and Pediatric Dose	The amount per pound (lb) was added to both the adult and pediatric dose (0.5 gram/lb).
Albuterol Sulfate (Proventil, Ventolin)	207	g)(2)(a) & (b)	Pediatric age descriptions.	The order of the age-based dose of albuterol was switched. (a) Age less than two years of age: and (b) Age two or older:
Aspirin	208	g)(1)	Adult: 162 mg or 325 mg chewed	The 162 mg dose of aspirin should not be administered. Aspirin should only be administered at a dose of 325 mg chewed.
Atropine Sulfate	209	c)(4)	Indications	Nerve agents were added to the list of indications.
Atropine Sulfate	210	g)(2)	Pediatric: Administer 0.02 mg/kg IV/IO/ET (with a minimum dose of 0.1 mg)	A maximum single dose of pediatric atropine has been established. The new text reads: "Maximum single dose Child (10 kg - 25 kg), 0.5mg Adolescent (25 - 40 kg), 1 mg. May be repeated one time".
Atropine Sulfate	210	g)(4)	New	A reference was added for Nerve agent exposure. The text reads: "Nerve agent exposure, See MARK I in WMD Protocols."
Atrovent (Ipratropium)	211	d.(3)	Less than a year of age.	Less than one year of age.
Atrovent (Ipratropium)	212	g)(2)	Administer a combination of albuterol/atrovent via nebulizer: For an infant less than 1 year of age, contraindicated. For a child 1 year of age or greater, but less than 2 years of age, administer albuterol 1.25 mg and atrovent 250 mcg. For a patient 2 years of age or greater, administer albuterol 2.5 mg and atrovent 500 mcg.	The dosage for an infant less than 1 year of age was clarified; atrovent is contraindicated. The remaining age groups were unchanged.
Diazepam (Valium)	216	g)(1) & (2)	New	IM has been added as a route for the administration of diazepam to adult and pediatric patients. IM administration of diazepam requires all providers to obtain medical consultation.
Diazepam (Valium)	216	g)(2)	Rectal dose: Administer up to 0.5 mg/kg, maximum total dose 20 mg.)	The rectal dose of diazepam has been lowered. The new text reads: "Rectal Dose: Administer up to 0.2 mg/kg, maximum total dose 10 mg."

PROTOCOL TITLE	PAGE #	LINE #	ORIGINAL	NEW INFORMATION
Diazepam (Valium)	216	g)(3)	New	An exception for medical consultation has been added. The new text reads: "Severe nerve agent exposure: Providers may administer without consultation."
Diltiazem (Cardizem)	217	h)(1)	Adult dose	A maximum dose has been added for the initial and repeat doses of dilitiazem. The text reads: "0.25 mg/kg (maximum dose 20 mg) by IV bolus administered slow IV over 2 minutes; if response is not adequate, repeat in 15 minutes with a dosage of 0.35 mg/kg (Maximum dose 25 mg) over 2 minutes."
Diphenhydramine Hydrochloride (Benadryl)	219	g)(3)	Medical consultation required for doses greater than 25 mg.	Medical consultation required for administration in mild allergic reaction or anytime doses are greater than 25 mg.
Epinephrine 1:10,000/1:1,000	222	c)(2)	Severe Anaphylaxis	The text has been modified to include allergic reaction. It now reads: "Moderate to severe allergic reaction/anaphylaxis."
Epinephrine 1:10,000/1:1,000	223	g)(1)(b)		The use of "high dose epinephrine" has been eliminated. The second and subsequent doses of epinephrine are now the same.
Epinephrine 1:10,000/1:1,000	223	g)(1)(c)	A Neonatal dose was added.	The following neonatal dose was added to the Cardiac Arrest and Bradycardia sections. It reads, "Neonate: IVP/IO: (i) 1st dose: 0.01 mg/kg (0.1 ml/kg) of 1:10,000 repeat every 3-5 minutes (ii) ET: 0.01 mg/kg of 1:10,000, diluted with 1 ml of lactated ringer's solution."
Epinephrine 1:10,000/1:1,000	224	(c)	A Neonatal dose was added.	The following neonatal dose was added to the Cardiac Arrest and Bradycardia sections. It reads, "Neonate: IVP/IO: (i) 1st dose: 0.01 mg/kg (0.1 ml/kg) of 1:10,000 repeat every 3-5 minutes (ii) ET: 0.01 mg/kg of 1:10,000, diluted with 1 ml of lactated ringer's solution."
Furosemide	225	c)	Acute pulmonary edema, CHF, hypertension, edema related to kidney or liver disease	"Hypertension" has been deleted.
Furosemide	225	g)	Dosage (Paramedic may perform without consult except in hypertensive crisis.)	The "except in hypertensive crisis" has been eliminated.

PROTOCOL TITLE	PAGE #	LINE #	ORIGINAL	NEW INFORMATION
Ipecac	229			The entire reference has been removed. Ipecac is no longer in the Maryland Medical Protocols for EMS Providers.
Lactated Ringer's	229	(3)(c)	New	A specific volume infusion has been added for the neonate and the volume sensitive child. The new text reads, "Volume infusion for neonates and volume sensitive children 10 ml/kg; for infant and child 20 ml/kg."
Morphine Sulfate	233	g)(1)(c)	… contact medical direction	Contact medical direction was changed to "requires medical consultation."
Morphine Sulfate	233	g)(1)(e)	New	Pacing: Administer 1-2 mg/min IVP.
Morphine Sulfate	233	g)(2)	Consider morphine sulfate, 0.1 mg/kg slow IV/IO/IM, Administer 1-2 mg/min	The pediatric dose of Morphine was made consistent. It now reads, "Pediatric: 0.1 mg/kg, slow IVP/IO/IM (slow 1-2 mg/min), Maximum dose 5 mg."
Nitroglycerin	235	d)(3)	Viagra, Cialis, or Levitra ingestion within the last 24 hours	Nitroglycerin Is Contraindicated For Any Patient Having Taken Medication For Erectile Dysfunction (eg. Viagra, Cialis, or Levitra) Within The Past 48 hours. Medical Consultation Is Required To Override This Contraindication.
Rapid Sequence Intubation Protocol Package	246	d)(1)(a)	Midazolam	Etomidate was added as an option to Midazolam. The new section reads: "…Etomidate: Administer 0.3 mg/kg (12-30 mg) IVP over 30-60 seconds (a) May omit for GCS of 3-8."
Rapid Sequence Intubation Protocol Package	247	2.c)(1)	Midazolam	Etomidate was added as an option to Midazolam. The new section reads "Etomidate 0.3 mg/kg (12-30 mg) IVP over 30-60 seconds".
Pediatric Rapid Sequence Intubation Protocol Package	252-256		New	This protocol was added for performing Rapid Sequence Intubation on children less than 10 years of age.
Etomidate (Amidate)	257		New	This medication was added for the adult and pediatric Rapid Sequence Intubation Pilot Program.

PROTOCOL TITLE	PAGE #	LINE #	ORIGINAL	NEW INFORMATION
Optional Supplemental Program CPAP	262	b)(1)	This eliminates the possibility for adverse reactions following the administration of any antibiotics given for infection.	"This eliminates the possibility for adverse reactions following the administration of any antibiotics given for infection." was removed. The text now reads: CPAP is a less invasive procedure with a lesser risk of infection.
Glycoprotein IIb/IIIa Antagonist	264	7.a)	INITIAL BOLUS: Follow Standard Dosing. Insert bolus based on patient weight.	Glycoprotein IIb/IIIa Atagonists must be administered in the hospital setting by a physician or RN. The new text reads: "INITIAL BOLUS: Given at sending facility and should be documented."
Glycoprotein IIb/IIIa Antagonist	264	7.b)	MAINTENANCE IV DRIP: Follow Standard Dosing. Insert drip based on patient weight.	The text now reads: "MAINTENANCE IV DRIP: Follow Standard Dosing. Maintain drip based on patient weight and sending physician's orders."
Optional Supplemental Program MARK I Kits	269	5.b)	New	EMT-B may administer MARK I kits (up to a total of three kits) as buddy care to public safety personnel or when directed to do so by an ALS provider based on signs and symptoms in a mass casualty incident (MCI) or on-site chemical testing, confirming nerve or organophosphate agent presence in a mass casualty incident. The diazepam 10 mg auto-injector (CANA) can only be administered when three MARK I kits are administered in a severe exposure by an ALS provider. Medical consultation is not required in these situations.
Optional Supplemental Program MARK I Kits	270	e)(4)	New	EMT-B may administer MARK I kits (up to a total of three kits) as buddy care to public safety personnel or when directed to do so by an ALS provider based on signs and symptoms in a mass casualty incident (MCI) or on-site chemical testing, confirming nerve or organophosphate agent presence in a mass casualty incident. The diazepam 10 mg auto-injector (CANA) can only be administered when three MARK I kits are administered in a severe exposure by an ALS provider. Medical consultation is not required in these situations.

PROTOCOL TITLE	PAGE #	LINE #	ORIGINAL	NEW INFORMATION
Optional Supplemental Program MARK I Kits	270	(3)(b)	The dosage may be repeated in 10 minutes if the patient remains symptomatic.	The new text reads: "The dose of 2 mg of atropine may be repeated in 10 minutes if the patient remains symptomatic."
Optional Supplemental Program MARK I Kits	270	(4)(c)	Dosage may be repeated until symptoms decrease or cease.	The new text reads: "The dose of 2 mg of atropine may be repeated until symptoms decrease or cease."
Optional Supplemental Program Transport of Ventilated Patients	272	6.(b)	Optional Program Requirements	The requirement of reporting each use of a ventilator to the Office of the State EMS Medical Director was removed.
Optional Supplemental Program Transport of Ventilated Patients	275	6.(a)	Optional Program Requirements	The requirement of reporting each use of a ventilator to the Office of the State EMS Medical Director was removed.
Wilderness Protocols	276-291			No changes were made.
Weapons of Mass Destruction Protocols	17	3.a.(1)	New	EMT-B may administer MARK I kits (up to a total of three kits) as buddy care to public safety personnel or when directed to do so by an ALS provider based on signs and symptoms in a mass casualty incident (MCI) or on-site chemical testing, confirming nerve or organophosphate agent presence in a mass casualty incident. The diazepam 10 mg auto-injector (CANA) can only be administered when three MARK I kits are administered in a severe exposure by an ALS provider. Medical consultation is not required in these situations.
Weapons of Mass Destruction Protocols	17	3.a.(2) & (3)		The nerve agent (GA, GB, GD, GF, VX) protocol was updated. The dosing of atropine and pralidoxime was revised.
Weapons of Mass Destruction Protocols	24			The doseage chart for Pralidoxime (2-PAM, Protopam) at 50 mg/mL was revised.