



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

Toxicological Emergencies – ALS

SERVING THE CITIZENS, EMS AGENCIES, ACUTE CARE HOSPITALS AND LOCAL GOVERNMENTS IN VIRGINIA PLANNING DISTRICTS 13,14,15 AND 19

7818 E. Parham Road, Suite 911 • Richmond, VA 23294
PHONE: 804-560-3300 • FAX: 804-560-0909 • www.odemsa.vaems.org



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

Medical – Overdose/Poisoning - ALS – Opioid

OVERVIEW:

The goal in treating an opiate overdose patient is generally **not to wake the patient**, but to **maintain breathing and the airway**.

While difficult, this is especially important as opiates are often mixed with stimulants and other drugs at the street level, and the opiate may be masking or suppressing other toxic effects.

Unfortunately, the history of poisoning /overdose is notoriously unreliable whether it is obtained from the patient, friends and family members, or emergency services personnel.

Poison Control may be contacted at any time for information on poisoning (**1- 800-222-1222**).

Only Medical Control may give patient care direction.

Despite the possible inaccuracies, the most important historical factors to obtain include:

- **What** poison was involved?
- **How much** was taken?
- **How** was it taken?
- **When** was it taken?
- **Why** was it taken?
- **What** else was taken?



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

Student Can demonstrate the following competencies without prompting and can explain the clinical reasoning for each listed below:

1. Demonstrates proper assessment techniques / Physical skills.
 - a. Scene Survey
 - b. HPI – Complete
 - c. Signs and Symptoms
 - d. SAMPLE
 - e. OPQRST
 - f. MOI – NOI
 - g. Need for ALS.
 - h. Pulse Ox
 - i. End Tidal CO₂
 - j. Place on Cardiac Monitor/Obtain 12 lead EKG.
 - k. IV Access
 - l. Primary Assessment
 - i. XABCDE Format
 - m. Life Threat Bleeding
 - i. Assessment
 - ii. Correction
 - n. Airway
 - i. Assessment
 - ii. Correction
 - o. Breathing
 - i. Assessment
 - ii. Correction
 - p. Circulation
 - i. Assessment
 - ii. Correction
 1. Need for CPR.
 - q. Disability
 - i. Assessment

SERVING THE CITIZENS, EMS AGENCIES, ACUTE CARE HOSPITALS AND LOCAL GOVERNMENTS IN VIRGINIA PLANNING DISTRICTS 13,14,15 AND 19

7818 E. Parham Road, Suite 911 • Richmond, VA 23294
PHONE: 804-560-3300 • FAX: 804-560-0909 • www.odemsa.vaems.org



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

- ii. Correction
- r. Exposure
 - i. Assessment
 - ii. Correction
- 2. Demonstrates the following skills.
 - a. Proper Physical Exam
 - i. Head to toe format
 - ii. All major body parts/systems
 - iii. Vital Signs / Documentation
 - b. Frequently assess for shock
 - c. Pulse Ox Measurement – may not work due to cold extremity/poor perfusion.
 - d. Oxygen/Ventilation based on Assessment.
 - e. Blood Glucose Level
 - i. If less than 60mg/dl
 - 1. Refer to the Hypoglycemia Protocol.
 - ii. If greater than 300 mg/dl
 - 1. Refer to the Hyperglycemia Protocol.
 - f. IV Access
 - g. If Respiratory effort remains diminished/ineffective
 - i. Administer Narcan IN/IV to maintain effective Respiratory Effort.
 - ii. Repeated as needed.
 - h. Demonstrates the appropriate transport mode and destination.
 - i. Transport as soon as safe to do so to the proper destination.

The above is a very abbreviated summary of the Protocol.

For the complete Protocol, please review the appropriate Protocol as published by ODEMSA.



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

Medical – Overdose/Poisoning - ALS – Stimulant

OVERVIEW:

Hyperdynamic “stimulant” drugs, also known as sympathomimetics, include cocaine, methamphetamine, amphetamine, and MDMA (ecstasy).

Patient care should be focused on preventing / mitigating hyperthermia, agitated delirium, positional asphyxia, hypoxia, and physical self-harm.

With a stimulant overdose (tachycardia, agitation, hyperthermia, and/or hypertension), treatment with benzodiazepines is indicated in addition to rhythm-specific therapy or anti-hypertensive meds **(with the exception of beta-blockers)**.

Unfortunately, the history of poisoning /overdose is notoriously unreliable whether it is obtained from the patient, friends and family members, or emergency services personnel.

Poison Control may be contacted at any time for information on poisoning **(1- 800-222-1222)**.
Only Medical Control may give patient care direction.

Despite the possible inaccuracies, the most important historical factors to obtain include:

- **What** poison was involved?
- **How much** was taken?
- **How** was it taken?
- **When** was it taken?
- **Why** was it taken?



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

- **What** else was taken?

Student Can demonstrate the following competencies without prompting and can explain the clinical reasoning for each listed below:

1. Demonstrates proper assessment techniques / Physical skills.
 - a. Scene Survey
 - b. HPI – Complete
 - c. Signs and Symptoms
 - d. SAMPLE
 - e. OPQRST
 - f. MOI – NOI
 - g. Need for ALS.
 - h. Pulse Ox
 - i. End Tidal CO₂
 - j. Place on Cardiac Monitor/Obtain 12 lead EKG.
 - k. IV Access
 - l. Primary Assessment
 - i. XABCDE Format
 - m. Life Threat Bleeding
 - i. Assessment
 - ii. Correction
 - n. Airway
 - i. Assessment
 - ii. Correction
 - o. Breathing
 - i. Assessment
 - ii. Correction
 - p. Circulation
 - i. Assessment
 - ii. Correction
 1. Need for CPR.
 - q. Disability

SERVING THE CITIZENS, EMS AGENCIES, ACUTE CARE HOSPITALS AND LOCAL GOVERNMENTS IN VIRGINIA PLANNING DISTRICTS 13,14,15 AND 19

7818 E. Parham Road, Suite 911 • Richmond, VA 23294
PHONE: 804-560-3300 • FAX: 804-560-0909 • www.odemsa.vaems.org



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

- i. Assessment
 - ii. Correction
 - r. Exposure
 - i. Assessment
 - ii. Correction
2. Demonstrates the following skills.
 - a. Proper Physical Exam
 - i. Head to toe format
 - ii. All major body parts/systems
 - iii. Vital Signs / Documentation
 - b. Frequently assess for shock
 - c. Pulse Ox Measurement – may not work due to cold extremity/poor perfusion.
 - d. Oxygen/Ventilation based on Assessment.
 - e. Blood Glucose Level
 - i. If less than 60mg/dl
 1. Refer to the Hypoglycemia Protocol.
 - ii. If greater than 300 mg/dl
 1. Refer to the Hyperglycemia Protocol.
 - f. Obtain 12 Lead EKG
 - i. If Chest Pain due to suspected cocaine use **WITHOUT** ST elevation
 1. Benzodiazepine
 2. Refer to Cardia Chest Pain
 - g. If the patient is seizing
 - i. Refer to Medical Care – Seizure Protocol
 - h. Demonstrates the appropriate transport mode and destination.
 - i. Transport as soon as safe to do so to the proper destination.

The above is a very abbreviated summary of the Protocol.

For the complete Protocol, please review the appropriate Protocol as published by ODEMSA.



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

Medical – Overdose/Poisoning - ALS

Tricyclic Anti-depressant (TCA)

OVERVIEW:

Aggressive care at the onset of signs and symptoms of a TCA overdose is essential, as the patient can decompensate quickly.

Early signs and symptoms include widening of the QRS, tachycardia, hypotension, and altered LOC.

Unfortunately, the history of poisoning /overdose is notoriously unreliable whether it is obtained from the patient, friends and family members, or emergency services personnel.

Poison Control may be contacted at any time for information on poisoning (1- 800-222-1222).

Only Medical Control may give patient care direction.

Despite the possible inaccuracies, the most important historical factors to obtain include:

- **What** poison was involved?
- **How much** was taken?
- **How** was it taken?
- **When** was it taken?
- **Why** was it taken?
- **What** else was taken?



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

Student Can demonstrate the following competencies without prompting and can explain the clinical reasoning for each listed below:

1. Demonstrates proper assessment techniques / Physical skills.
 - a. Scene Survey
 - b. HPI – Complete
 - c. Signs and Symptoms
 - d. SAMPLE
 - e. OPQRST
 - f. MOI – NOI
 - g. Need for ALS.
 - h. Pulse Ox
 - i. End Tidal CO₂
 - j. Obtain 12 lead EKG.
 - k. IV Access
 - l. Primary Assessment
 - i. XABCDE Format
 - m. Life Threat Bleeding
 - i. Assessment
 - ii. Correction
 - n. Airway
 - i. Assessment
 - ii. Correction
 - o. Breathing
 - i. Assessment
 - ii. Correction
 - p. Circulation
 - i. Assessment
 - ii. Correction
 1. Need for CPR.
 - q. Disability
 - i. Assessment

SERVING THE CITIZENS, EMS AGENCIES, ACUTE CARE HOSPITALS AND LOCAL GOVERNMENTS IN VIRGINIA PLANNING DISTRICTS 13,14,15 AND 19

7818 E. Parham Road, Suite 911 • Richmond, VA 23294
PHONE: 804-560-3300 • FAX: 804-560-0909 • www.odemsa.vaems.org



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

- ii. Correction
- r. Exposure
 - i. Assessment
 - ii. Correction
- 2. Demonstrates the following skills.
 - a. Proper Physical Exam
 - i. Head to toe format
 - ii. All major body parts/systems
 - iii. Vital Signs / Documentation
 - b. Frequently assess for shock
 - c. Pulse Ox Measurement
 - d. Oxygen/Ventilation based on Assessment.
 - e. Blood Glucose Level
 - i. If less than 60mg/dl
 - 1. Refer to the Hypoglycemia Protocol.
 - ii. If greater than 300 mg/dl
 - 1. Refer to the Hyperglycemia Protocol.
 - f. Obtain 12 Lead EKG
 - i. If TCA overdose is suspected and QRS noted to be wider 0.12 ms, Seizure, Hypotension, Tachycardia, and or Heart Block noted
 - 1. Sodium Bicarbonate 50 mEq IVP
 - g. If the patient is seizing
 - i. See Step above for Sodium Bicarbonate
 - ii. Seizure Protocol
 - h. Demonstrates the appropriate transport mode and destination.
 - i. Transport as soon as safe to do so to the proper destination.

The above is a very abbreviated summary of the Protocol.

For the complete Protocol, please review the appropriate Protocol as published by ODEMSA.



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

Student's and FTO's signatures below signify that the student has demonstrated sufficient working knowledge and can perform such competency and has had the opportunity to ask and has had all questions and answers provided to their level of comfort.

Competency – ODEMSA – Regional Protocols – **Medical – Overdose/Poisoning - ALS – Tricyclic Anti-depressant (TCA)**

Student's Name and Signature – date below:

_____ Date _____
Printed Name Signature

FTO's Name and Signature – date below:

_____ Date _____
Printed Name Signature



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

Exposure – **Organophosphate** – ALS

OVERVIEW:

Organophosphates irreversibly bind to cholinesterase, causing the phosphorylation and deactivation of acetylcholinesterase.

The accumulation of acetylcholine at the neural synapse causes initial overstimulation, followed by exhaustion and disruption of postsynaptic neural transmission in the central nervous system (CNS) and peripheral nervous systems (PNS).

If the organophosphate/cholinesterase bond is not broken by pharmacologic intervention within 24 hours, large amounts of cholinesterase are destroyed, causing long-term morbidity or death.

Carbamate poisoning exhibits a similar clinical picture to organophosphate toxicity. However, unlike organophosphates, carbamate compounds temporarily bind cholinesterase for approximately 6 hours with no permanent damage.

Carbamates have poor CNS penetration and cause minimal CNS symptoms.

The most important historical factors to obtain include:

- **What** poison was involved?
- **How** long the exposure lasted?
- **How** were they exposed?
- **When** were they exposed?

Poison Control may be contacted at any time for information on poisoning (**1- 800-222-1222**).



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

Only Medical Control may give patient care direction.

Student Can demonstrate the following competencies without prompting and can explain the clinical reasoning for each listed below:

1. Demonstrates proper assessment techniques / Physical skills.
 - a. Scene Survey
 - b. HPI – Complete
 - c. Signs and Symptoms
 - d. SAMPLE
 - e. OPQRST
 - f. MOI – NOI
 - a. Pulse Ox
 - b. End Tidal CO₂
 - c. Place on Cardiac Monitor/Obtain 12 lead EKG.
 - g. IV Access
 - h. Need for ALS.
 - i. HAZMAT
 - i. Proper Decontamination of the patient prior to EMS Contact**
 - j. Primary Assessment
 - i. XABCDE Format
 - k. Life Threat Bleeding
 - i. Assessment
 - ii. Correction
 - l. Airway
 - i. Assessment
 - ii. Correction
 - m. Breathing
 - i. Assessment
 - ii. Correction
 - n. Circulation
 - i. Assessment
 - ii. Correction

SERVING THE CITIZENS, EMS AGENCIES, ACUTE CARE HOSPITALS AND LOCAL GOVERNMENTS IN VIRGINIA PLANNING DISTRICTS 13,14,15 AND 19

7818 E. Parham Road, Suite 911 • Richmond, VA 23294
PHONE: 804-560-3300 • FAX: 804-560-0909 • www.odemsa.vaems.org



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

1. Need for CPR.
 - o. Disability
 - i. Assessment
 - ii. Correction
 - p. Exposure
 - i. Assessment
 - ii. Correction
2. Demonstrates the following skills.
 - a. Proper
 - b. Proper Physical Exam
 - i. Head to toe format
 - ii. All major body parts/systems
 - iii. Vital Signs / Documentation
 - c. Frequently assess for shock
 - d. Pulse Ox Measurement
 - e. Oxygen/Ventilation based on Assessment.
 - f. Blood Glucose Level
 - i. If less than 60mg/dl
 1. Refer to the Hypoglycemia Protocol.
 - ii. If greater than 300 mg/dl
 1. Refer to the Hyperglycemia Protocol.
 - g. Obtain 12 Lead EKG
 - h. If Respiratory Distress due to Secretions
 - i. Atropine 1-2 mg IVP every 5 minutes until secretions cease of drug supply is exhausted
There is no Maximum Dose of atropine in this Situation.
 - i. If the patient is seizing
 - i. ALS
 - ii. Refer to Medical Care – Seizure Protocol
 - j. Bronchospasm
 - i. Refer to Medical Care – Respiratory Distress Protocol
 - k. Demonstrates the appropriate transport mode and destination.
 - l. Transport as soon as safe to do so to the proper destination.

SERVING THE CITIZENS, EMS AGENCIES, ACUTE CARE HOSPITALS AND LOCAL GOVERNMENTS IN VIRGINIA PLANNING DISTRICTS 13,14,15 AND 19

7818 E. Parham Road, Suite 911 • Richmond, VA 23294
PHONE: 804-560-3300 • FAX: 804-560-0909 • www.odemsa.vaems.org



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

The above is a very abbreviated summary of the Protocol.

For the complete Protocol, please review the appropriate Protocol as published by ODEMSA.



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

Medical – Overdose/Poisoning - ALS

Calcium Channel Blocker

OVERVIEW:

Overdose by immediate-release agents is characterized by rapid progression to hypotension, bradyarrhythmias, and cardiac arrest.

Overdose by extended-release formulations can result in delayed onset of arrhythmias, shock, delayed cardiac collapse, and bowel ischemia.

Unfortunately, the history of poisoning /overdose is notoriously unreliable whether it is obtained from the patient, friends and family members, or emergency services personnel.

Poison Control may be contacted at any time for information on poisoning (**1- 800-222-1222**).

Only Medical Control may give patient care direction.

Despite the possible inaccuracies, the most important historical factors to obtain include:

- **What** poison was involved?
- **How much** was taken?
- **How** was it taken?
- **When** was it taken?
- **Why** was it taken?
- **What** else was taken?



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

Student Can demonstrate the following competencies without prompting and can explain the clinical reasoning for each listed below:

1. Demonstrates proper assessment techniques / Physical skills.
 - a. Scene Survey
 - b. HPI – Complete
 - c. Signs and Symptoms
 - d. SAMPLE
 - e. OPQRST
 - f. MOI – NOI
 - g. Need for ALS.
 - h. Pulse Ox
 - i. End Tidal CO₂
 - j. Place on Cardiac Monitor/Obtain 12 lead EKG.
 - k. IV Access
 - l. Primary Assessment
 - i. XABCDE Format
 - m. Life Threat Bleeding
 - i. Assessment
 - ii. Correction
 - n. Airway
 - i. Assessment
 - ii. Correction
 - o. Breathing
 - i. Assessment
 - ii. Correction
 - p. Circulation
 - i. Assessment
 - ii. Correction
 1. Need for CPR.
 - q. Disability
 - i. Assessment

SERVING THE CITIZENS, EMS AGENCIES, ACUTE CARE HOSPITALS AND LOCAL GOVERNMENTS IN VIRGINIA PLANNING DISTRICTS 13,14,15 AND 19

7818 E. Parham Road, Suite 911 • Richmond, VA 23294
PHONE: 804-560-3300 • FAX: 804-560-0909 • www.odemsa.vaems.org



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

- ii. Correction
 - r. Exposure
 - i. Assessment
 - ii. Correction
 - s. Place on Cardiac Monitor
 - i. Refer to the appropriate Cardiac Dysrhythmia Protocol
 - t. IV Bolus to maintain SBP greater than 90 mmHg.
 - i. 250 ml bolus - reassess.
 - ii. Bolus should not exceed 20 ml/kg.
 - Caution for patients in Renal Failure and Hx of HF**
- 2. Demonstrates the following skills.
 - a. Proper Physical Exam
 - i. Head to toe format
 - ii. All major body parts/systems
 - iii. Vital Signs / Documentation
 - b. Frequently assess for shock
 - c. Pulse Ox Measurement
 - d. Oxygen/Ventilation based on Assessment.
 - e. Blood Glucose Level
 - i. If less than 60mg/dl
 - 1. Refer to the Hypoglycemia Protocol.
 - ii. If greater than 300 mg/dl
 - 1. Refer to the Hyperglycemia Protocol.
 - f. Obtain 12 Lead EKG
 - i. If Acute MI Noted
 - 1. ALS
 - g. If the patient is seizing
 - i. ALS
 - ii. Refer to Medical Care – Seizure Protocol
 - h. Demonstrates the appropriate transport mode and destination.
 - i. Transport as soon as safe to do so to the proper destination.



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

Medical – Overdose/Poisoning - ALS

Beta Blocker

OVERVIEW:

Beta blockers are a type of drug generally used to treat hypertension.

Although the specific ingredients vary among manufacturers, the main ingredient among them all is a beta-adrenergic blocking substance.

This substance blocks the effects of epinephrine on the body.

Medical complications of beta-blocker overdose include hypotension, bradycardia, heart failure, impaired atrioventricular conduction, bronchospasm, and occasionally, seizures.

Unfortunately, the history of poisoning /overdose is notoriously unreliable whether it is obtained from the patient, friends and family members, or emergency services personnel.

Poison Control may be contacted at any time for information on poisoning (**1- 800-222-1222**).

Only Medical Control may give patient care direction.

Despite the possible inaccuracies, the most important historical factors to obtain include:

- **What** poison was involved?
- **How much** was taken?
- **How** was it taken?
- **When** was it taken?
- **Why** was it taken?



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

- **What** else was taken?

Student Can demonstrate the following competencies without prompting and can explain the clinical reasoning for each listed below:

1. Demonstrates proper assessment techniques / Physical skills.
 - a. Scene Survey
 - b. HPI – Complete
 - c. Signs and Symptoms
 - d. SAMPLE
 - e. OPQRST
 - f. MOI – NOI
 - g. Need for ALS.
 - h. Pulse Ox
 - i. End Tidal CO₂
 - j. Place on Cardiac Monitor/Obtain 12 lead EKG.
 - k. IV Access
 - l. Need for ALS.
 - m. Primary Assessment
 - i. XABCDE Format
 - n. Life Threat Bleeding
 - i. Assessment
 - ii. Correction
 - o. Airway
 - i. Assessment
 - ii. Correction
 - p. Breathing
 - i. Assessment
 - ii. Correction
 - q. Circulation
 - i. Assessment
 - ii. Correction
 1. Need for CPR.

SERVING THE CITIZENS, EMS AGENCIES, ACUTE CARE HOSPITALS AND LOCAL GOVERNMENTS IN VIRGINIA PLANNING DISTRICTS 13,14,15 AND 19

7818 E. Parham Road, Suite 911 • Richmond, VA 23294
PHONE: 804-560-3300 • FAX: 804-560-0909 • www.odemsa.vaems.org



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

- r. Disability
 - i. Assessment
 - ii. Correction
- s. Exposure
 - i. Assessment
 - ii. Correction
- t. If symptomatic Bradycardia noted
 - i. Atropine 0.5 – 1 mg IVP/IO
 - 1. If no response may repeat the Atropine dose once more
 - 2. Glucagon 1 mg IVP/IO
 - a. If no response is noted in 5 minutes
 - i. Repeat Glucagon dose one more time
- 2. Demonstrates the following skills.
 - a. Proper Physical Exam
 - i. Head to toe format
 - ii. All major body parts/systems
 - iii. Vital Signs / Documentation
 - b. Frequently assess for shock
 - c. Pulse Ox Measurement
 - d. Oxygen/Ventilation based on Assessment.
 - e. Blood Glucose Level
 - i. If less than 60mg/dl
 - 1. Refer to the Hypoglycemia Protocol.
 - ii. If greater than 300 mg/dl
 - 1. Refer to the Hyperglycemia Protocol.
 - f. Obtain 12 Lead EKG
 - i. If Acute MI Noted
 - 1. ALS
 - g. If the patient is seizing
 - i. ALS
 - ii. Refer to Medical Care – Seizure Protocol
 - h. Demonstrates the appropriate transport mode and destination.
 - i. Transport as soon as safe to do so to the proper destination.

SERVING THE CITIZENS, EMS AGENCIES, ACUTE CARE HOSPITALS AND LOCAL GOVERNMENTS IN VIRGINIA PLANNING DISTRICTS 13,14,15 AND 19

7818 E. Parham Road, Suite 911 • Richmond, VA 23294
PHONE: 804-560-3300 • FAX: 804-560-0909 • www.odemsa.vaems.org



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

The above is a very abbreviated summary of the Protocol.

For the complete Protocol, please review the appropriate Protocol as published by ODEMSA.



OLD DOMINION EMERGENCY MEDICAL SERVICES ALLIANCE

SERVING THE CITIZENS, EMS AGENCIES, ACUTE CARE HOSPITALS AND LOCAL GOVERNMENTS IN VIRGINIA PLANNING DISTRICTS 13,14,15 AND 19

7818 E. Parham Road, Suite 911 • Richmond, VA 23294
PHONE: 804-560-3300 • FAX: 804-560-0909 • www.odemsa.vaems.org