



## **MICHIGAN State Protocols**

**Protocol Number**

**Protocol Name  
Medications**

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## **Medication Administration**

### **Information:**

EMS providers preparing to administer medications in the out of hospital setting should review and/or recite the "6 Rights" prior to administering any medication to a patient. While all 6 elements are important, In the out of hospital setting, special attention should be paid to the right medication, right dose, and right route - as these are frequently the areas of error in the EMS environment. In addition, EMS providers should ensure the patient is informed as to what medications they are receiving and afford an opportunity for the patient to refuse. Lastly, documentation is essential so that medications administered in the out of hospital setting become part of the patient's clinical medical record. By following the "6 Rights" of medication administration, EMS providers will significantly decrease the potential and number of errors associated with medication administration.

### **Definitions:**

- I. Medication: Any pharmacological intervention used to treat, prevent, or reduce signs and symptoms of diseases, disorders, and/or traumatic injuries.
- II. Medication administration routes include the following: Intramuscular, Intravenous, Intraosseous, Oral, Buccal, Rectal, Inhaled, and Subcutaneous.

### **Procedure:**

- I. Prior to the administration of any medication ensure the following are reviewed and/or verbalized by at least two providers – if available (checked, and double checked):
  - A. 6 Rights of Medication Administration –
    1. Right Patient
    2. Right Dose
    3. Right Medication (including indication)
    4. Right Route
    5. Right Time
    6. Right Documentation (including response)
- II. Calculating medications when given a dosage range and a per kg dose:
  - A. Calculate weight in kilos and multiply by the prescribed dosage (e.g. - mg/kg)
  - B. The resultant dose should be less than the maximum single dose.
    1. In adults, for ease of administration, doses may be rounded to the nearest whole number within the range for those calculated doses at or above 1 dosage unit, or to the nearest tenth for those below 1 dosage unit (examples: 1.2 mg rounded to 1 mg, and 0.26mg rounded to 0.3mg). That calculated and rounded dose may be given and repeated in timed intervals, as indicated for that medication, to the control of symptoms or maximum stated cumulative dose if symptom control is not previously achieved.
    2. For pediatric patients, utilize MI-MEDIC and a length-based tape for all medication calculations.

Initial Date: 10/25/2017  
Revised Date: 02/13/23

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- C. Pediatric patients will never be given a single or total dose that exceeds the maximum single or total adult dose.
- III. Following administration of any medication
  - A. Document all pertinent aspects of the medication administration including but not limited to medication name, dose, route, and time in an electronic patient care report.
  - B. Obtain signature of prescriber (medical control physician or other qualified designee) per local medical control authority policy.



***Intranasal Medication Administration:***

Intranasal medication administration using an FDA approved and MCA authorized atomizing device as specified in applicable patient care protocols may be allowed for MFR per MCA selection.

MCA Approval for intranasal medication administration for MFR

Yes  
 No

MCA's will be responsible for maintaining a roster MFR of the BLS agencies choosing to participate and will submit roster to MDHHS

**Procedure:**

1. Select desired medication and determine dose per applicable protocol.
2. Draw up appropriate dose (volume) of medication plus an additional 0.1 mL to account for device dead space.
3. Attach atomizing device to syringe.
4. Use one hand to support back of patient's head as needed.
5. Place tip of atomizing device snugly against nostril aiming slightly upward and outward. Administration angle should be approximately 45°.
6. Rapidly administer one half of the dose of medication, briskly pushing plunger.
7. Repeat with other nostril delivering the remaining volume of medication.
8. Use the highest concentration available for the medication.
9. Note: Maximal dose per nostril is 1 mL



***Nebulized Medication Administration***

Nebulized medication administration using an FDA approved and MCA authorized atomizing device as specified in applicable patient care protocols may be allowed for EMT per MCA selection.

Initial Date: 10/25/2017  
Revised Date: 02/13/23

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MCA Approval for nebulized medication administration by EMT

- Yes
- No

MCA's will be responsible for maintaining a roster MFR of the BLS agencies choosing to participate and will submit roster to MDHHS

**Procedure:**

1. Obtain vital signs and auscultate lung sounds.
2. Select desired medication and determine dose per applicable protocol.)
3. Place the appropriate volume of medication in the lower half of the nebulizer unit. Then screw the upper half of the unit in place.
4. Attach the nebulizer to the base of the T piece. Then attach the mouthpiece to the T piece or connect neb chamber to NRB mask.
5. Attach one end of the oxygen tubing to the base of the nebulizer and the other end of the oxygen tubing to the oxygen source.
6. Set the **oxygen** liter flow at 6 L/min.
7. Instruct the patient to breathe normally through the mouthpiece, taking a deep inspiration every 4 or 5 breaths.
8. Continue the treatment until all the medication has been delivered through the nebulizer. You may need to gently tap the reservoir once or twice during the treatment to re-disperse the medication.
9. Obtain and record another complete set of vital signs and lung sounds after completion of the treatment.



**Pediatric Considerations**

1. Infants and small children may not be able to use adult mouthpiece and may need to use blow-by or pediatric mask

**NOTES:**

MCL 333.17754 Section 1(C) ) An electronic signature or other identifier that specifically identifies and authenticates the prescriber or his or her agent.

## **Medication Substitution**

### **Purpose:**

This protocol allows for MCA to substitute medications during a time of shortage without having to enact emergency protocols within the MCA. This protocol does not replace or override any portion of the **Medication Shortage Procedure**. All procedures within that procedure must still be followed in regards to substitutions in concentration or medication.

### **Indications:**

None of the medication options indicated in the MCA approved protocol are available.

### **Procedure:**

1. Follow **Medication Shortage Procedure**.
2. Alternate concentrations are listed within this protocol for reference; these do not require a protocol change and are outlined in the **Medication Shortage Procedure**.
3. Notification and education of providers within the MCA should be done as soon as the substitution is known.
  - a. It is the responsibility of the MCA to distribute information on the shortages and substitutions to agencies for distribution to providers.
  - b. If a substitution is imminent, it is acceptable for an MCA to distribute information prior to the medication being substituted.
4. The MCA should notify the Division of EMS and Trauma if a substitution is suspected to last more than 60 days so that a more permanent protocol solution can be enacted.
5. All uses of substitute medications will be reviewed by PSRO for appropriateness.

<b>Current Medication</b>	<b>Substitution</b>
Amiodarone	Procainamide
Calcium Chloride	Calcium Gluconate
Diazepam	Lorazepam
Diphenhydramine	Famotidine Ranitidine Hydroxyzine
Fentanyl	Hydromorphone
Lidocaine	Procainamide
Midazolam	Lorazepam
Morphine	Hydromorphone
Ondansetron	Promethazine Compazine

## **Medication Shortage**

### **A. Definitions:**

1. **Alternate Concentration** – same medication, different concentration, while volume may change, the delivered dose remains unchanged, dilution may be required (*Epinephrine 1: 10,000 replaced using Epi 1: 1,000 with a 10mL diluent*)
2. **Alternate Supplied Volume** – same medication, same concentration, standard volume is unavailable, the delivered dose and volume remain the same (*Epi 1: 1,000, typically supplied in a 1mL vial replaced with Epi 1: 1,000 in a 10mL multi-dose vial due to shortage of the smaller vials*)
3. **Alternate Supply/Type** – same medication, standard supply type is unavailable (preloads vs. vials), dosing remains unchanged (*diphenhydramine 50mg/5mL preload is unavailable, replaced with diphenhydramine 50mg/5mL in a vial*)
4. **Alternate Form** – same medication, different route such that identical dosing does not yield the same systemic concentration or effect (*ondansetron 4mg vial unavailable, replaced with ondansetron 4mg ODT, option to repeat x 1 added to allow approximation of equivalent dosing*)
5. **Alternate Medications** – medication other than the standard approved medication which accomplishes an acceptably similar effect as the medication it replaces (*fentanyl 100mcg approved to replace morphine 10mg, dosing adjusted to obtain therapeutic equivalency*)
6. **Missing Medication** – standard medication which is unavailable (*amyl nitrite not available, acceptable alternative of Cyanokit is excessive in cost and size: alternate means to access treatment established – MEDDRUN*)
7. **Outsourced medications – Repackaged by a 340B or 503 B medications in the same concentration and volume that have at least a 90 day expiration date.**

### **B. Criteria:**

1. Participating pharmacies be it at the individual MCA or at a wider regional level, shall establish and maintain a listing of the standard medications and supplies contained in drug bags or boxes supplied to life support agencies for the purposes of treating patients.
2. Each participating pharmacy shall maintain a dated listing of alternative medications which are approved as substitutes or replacements for medications which are in shortage.
3. Due to the frequency of medication shortages and the need for alternative dosing or medication substitutions, each MCA shall develop and enact a medication cross-check procedure, to which EMS personnel will be held accountable as a means to avoid medication errors
4. Both the standard list and the alternate list (may be combined into a single document) shall be made readily available to system participants
5. The participating pharmacy shall enact policies/procedures which guide each of the following:
  - A. Recognition of medication shortages and a means to report them

- B. Pharmacy involvement in the investigation and designation of acceptable alternatives when shortages are identified
- C. An organized process by which participant pharmacies will enact the replacement or substitution
- D. A documented means of visually identifying when an alternative medication or dosing has been placed into an EMS drug bag or box, or when a medication is missing
  - a. **Alternate medications** will be indicated by the placement of a sticker, tag or label on the outside of the bag or box; on the compartment where the alternate medication is located (if applicable) such that one inspecting the bag or box could easily recognize that the medication was included and what the missing medication it is intended to replace was. (Stickers GREEN or WHITE with GREEN)
  - b. **Missing medications** will be signified by the placement of a sticker, tag or label on the outside of the bag or box, on the compartment where the missing medication would be located (if applicable) such that one inspecting the bag or box could easily recognize that the medication was missing and what the potential alternate medication was. (Stickers YELLOW or WHITE with YELLOW)
- E. A method for dissemination of information related to changes made to the participating pharmacy drug bags or boxes with a means of accounting for receipt of the notifications at the agency/pharmacy levels

**C. Selection of Alternative Medications:**

1. Alternative concentrations, alternative supply/type and alternative supplied volume may be approved at the MCA/participating pharmacy level without a change to protocol provided that the standard and approved alternate medications are documented in the required lists, by effective date or date range.
2. Alternate form and alternate medications may be enacted as an emergency protocol according to statute and state approval, in the event of imminent shortage.
3. Non-standard medications, or those with no precedence of EMS use within Michigan must be submitted as new protocol submissions. The state may allow for expedited review in the event of imminent shortage of the medication being replaced.
4. If a missing medication will not be replaced, or an acceptable alternative is not found, a protocol or process should be developed or presented which addresses the potential inability to meet the existing protocol established standard of care.

**D. Process:**

1. A brightly colored ALTERNATE DOSE sticker/tag MUST be attached to the outside of the drug bag, box or narcotics box that lists the effected medication, the concentration of the substituted medication, the expiration date of the medication and the pharmacy name/date.
2. A brightly colored – MISSING MEDICATION sticker/tag must be placed on bags/boxes when a protocol medication is not available to stock in that bag/box.

3. A dosing/instruction card may be required to be included in the bag/box depending on the change.
4. Pharmacies experiencing shortages must provide notification of the need to utilize alternate dosing to the MCA , and receive MCA approval, prior to any change being implemented.
5. Drug bags, boxes or narcotics boxes with alternate dose medications/missing medications should have the medication replaced and the sticker/tag removed by pharmacy as soon as possible when the proper medication or concentration of medication is available.
6. Any additional equipment, which is needed to deliver the medication, must be included with the alternate dose.
7. EMS Agencies receiving notice of the utilization of alternate dosing, alternate medications or missing medications due to shortage must post the changes and ensure that all providers that may have cause to use the medications are made aware of the changes and are educated on proper use, risk and dosing of any new or replacement medication prior to their first potential exposure to the alternate dose or medication.
8. Any Special Instruction for a particular shortage will be communicated to all effected pharmacies and EMS services.



Initial Date: 02/14/2023

Revised Date:

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### ***Personal Metered Dose Inhaler Use (MCA Optional Protocol)***

Medical Control Authorities choosing to adopt this supplement may do so by selecting this check box. Adopting this supplement changes or clarifies the referenced protocol or procedure in some way. This supplement supersedes, clarifies, or has authority over the referenced protocol.

Purpose: Nebulized respiratory treatments are preferred over MDI's. This protocol is to allow for the use of the patient's own prescribed Metered Dose Inhaler (MDI) containing only albuterol, in place of nebulized albuterol administration by EMS personnel. This is to be used only in patients with **febrile respiratory symptoms**

- A. To substitute administration of **albuterol 2.5 mg/3ml NS** nebulized with use of the patient's own prescribed MDI the following criteria **MUST** be met.
  - 1. A specific and applicable treatment protocol is being followed
  - 2. EMS provider administering patient prescribed MDI is MCA authorized to administer **albuterol 2.5 mg/3ml NS** nebulized within the treatment protocol
  
- B. Indications
  - 1. Patients with febrile respiratory symptoms in need of bronchodilator treatment
  
- C. Requirements
  - 1. Patient has a prescribed rescue Metered Dosed Inhaler (MDI) containing albuterol only
  - 2. MDI is prescribed to the patient (no one else)
  - 3. Medication is not expired
  - 3. MDI has a functioning spacer (preferred not required)
  
- D. Procedure
  - 1. Assist patient in receiving four (4) puffs of their own rescue Albuterol Metered Dose Inhaler (MDI), with spacer, in place of each nebulized treatment of **albuterol 2.5 mg/3ml NS** as indicated in applicable treatment protocol.
  - 2. Use of a spacer is optimal. When no spacer is available, ensure that that patient breathes out completely before each puff in order to inhale as much medication as is possible.
  - 3. Do not use an MDI prescribed to another person.
  - 4. All MDI's should be brought to the hospital with the patient, if transported.

Initial Date: 02/14/2023

Revised Date:

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E. Directions for use an MDI with spacer (Figure 1)



Figure 1

1. Remove the cap from the MDI and spacer. Shake well
2. Insert the MDI into the open end of the spacer (opposite the mouthpiece).
3. Place the mouthpiece of the spacer between the patient's teeth and have them seal their lips tightly around it.
4. Have the patient breathe out completely
5. Press the MDI canister once.
6. Have the patient breathe in slowly and completely through their mouth. If you hear a "horn-like" sound, they are breathing too quickly and need to slow down.
7. Have the patient hold their breath for 10 seconds (count to 10 slowly) to allow the medication to reach the airway of the lung.
8. Repeat the above steps for each puff.
9. Replace the cap on your MDI when finished.

Initial Date: 09/2004

Revised Date: 04/28/2023

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## ***EMS: Medication and IV Supply Requirements***

- I. Emergency medical service vehicles will be equipped with medication boxes and IV kits or supplies consistent with their licensure level and protocols.
- II. The contents of the medication boxes are subject to inspection at any time by participating hospital pharmacy staff or by the medical control authority.
- III. Medication boxes will be prepared by MCA participating hospital pharmacies prior to each patient use see **Pharmacy: Medication and IV Supply Requirements Protocol**.
  - A. All medications will be obtained from an MCA participating pharmacy.
    - i. Oral glucose is the only medication that an agency may own and supply.
    - ii. Agencies must have an MCA approved process in place for manufacture recalls.
- IV. IV kits may be prepared and sealed by MCA participating pharmacies or by delegated agencies per MCA approved procedure.
- V. Licensed EMS personnel will assure that a proper seal is in place on medication boxes
- VI. The ambulance agency and licensed EMS personnel are responsible for the security of the medications and supplies.
- VII. Medication boxes and IV supplies shall be locked and secured in the EMS vehicle, except when required for patient care. Each agency will have a MCA approved procedure in place to ensure controlled access to the medication boxes and IV supplies.
- VIII. Licensed EMS personnel will include the following MCA approved documentation when returning medication boxes (and IV supplies if applicable) to a secure location for pharmacy exchange.
  - A. All medications used and/or wasted from the medication box (and IV supplies if applicable)
  - B. Physician, PA or NP signature for controlled substances administered.
  - C. Witness signature for controlled substance waste
    - i. Whenever controlled substances are used from a medication box, any unused or contaminated medication must be wasted in the presence of a witness that is a licensed healthcare professional that is authorized by the receiving facility to sign for wasted controlled substances.
  - D. MCAs will determine procedures and requirements for EPCR signatures
- IX. Opened syringes, needles, and any broken glass ampules will be properly disposed of and not left in the medication box. It is the responsibility of the licensed EMS personnel to clean any blood or body fluids from the inside of the medication box before it is returned to the pharmacy.

MCA Name:

MCA Board Approval Date:

MCA Implementation Date:

MDHHS Approval: 4/28/23

**Michigan**  
**MEDICATION SECTION**  
**EMS: MEDICATION AND**  
**IV SUPPLY REQUIREMENTS**

Initial Date: 09/2004

Revised Date: 04/28/2023

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- X. If EMS personnel or agency discover a discrepancy in medication box contents, they shall contact the last pharmacy which had possession of the box and mutually resolve the discrepancy.
  - A. Upon resolution, the agency shall submit a report to the medical control authority documenting the circumstances and the resolution. A copy of the report will also be sent to the pharmacy by the agency.
  - B. Discrepancies that cannot be resolved between the pharmacy and agency will immediately be forwarded to the medical control authority for investigation.

***Southeast Michigan Regional Protocol***  
***Medication Exchange and Replacement Procedure***  
**Medication Section Version: 37– July 2022 (Discard all previous versions)**

Initial Date: December, 2020

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Revised Date: July, 2022

***Southeast Michigan Medication Exchange and Replacement Procedure***

VEHICLE STOCK

- A. Each approved ALS unit will carry one GREEN LOCK SEALED Southeast Michigan (SEM) Regional Medication Box and A-Pack (Ancillary Pack). Contents are listed in Pharmacy Appendixes 1 and 2. Only appropriately numbered Medication Boxes and A-Packs issued by the participating Medical Control Authority are to be stocked by participating hospital pharmacies and issued to approved ALS units.
- B. Each EMS agency will be responsible for providing any additional equipment required by Michigan Department of Health & Human Services – Bureau of EMS & Trauma (MDHHS).
- C. All drugs, needles, syringes, and supplies will be stored in a securely locked and temperature-controlled location on each approved unit. Medication Boxes/A-Packs will remain sealed at all times except when in actual use.
- D. Medication Boxes/A-Packs are to be inspected daily by the crew of the unit for evidence of loss, theft, discrepancy, and expiration date. Inspection items include, but are not limited to: the Medication Box/A-Pack is locked in a compartment, the green lock is intact, the lock # matches number on the label, and medications are not expired. It is recommended that this inspection be included in a standard documented vehicle checklist.
- E. Agencies are responsible for maintaining Medication Boxes/A-Packs not in use by a crew in a locked and secured location, and have a system in place to **restrict** who accesses that location.
- F. Unopened Medication Boxes/A-Packs are to be exchanged within seven (7) days of the, “Use or Replace By” date.

USE/REPLACEMENT/EXCHANGE

- A. Medication Boxes/A-Packs will only be opened by a Paramedic when presented with a patient requiring Advanced Life Support care (when acting on written or transmitted orders from a physician at an appropriate On-Line Medical Control Facility) or the Pre-Medical Control section of approved treatment protocols.
- B. Red/Green Lock Procedure for Medication Boxes/A-Packs
  1. The Medication Box/A-Pack will be sealed using a green lock bearing the number indicated on the label.
  2. After the pharmacy inventory/restocking is complete, a red lock bearing the number indicated on the label will be placed in the Medication Box/A-Pack to be used by the Paramedic to seal the Medication Box/A-Pack after it has been used.
  3. When the Medication Box/A-Pack is opened by the Paramedic the broken numbered green lock will be placed in the Medication Box/A-Pack and delivered with the used Medication Box/A-Pack to the replacing pharmacy.
  4. After use the Paramedic will seal the Medication Box/A-Pack for exchange with the red lock from the Medication Box/A-Pack bearing the number indicated on the label.

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- C. OPTIONAL (MCA adoption required) Red/Green/White/ (or Yellow) Lock Procedure for MEDICATION BOXES ONLY
1. After the pharmacy inventory/restocking is complete, a red lock and green lock bearing the respective numbers indicated on the label will be placed in the Medication Box to be used to seal the box after initial inspection (green lock) and after post use inspection (red lock).
  2. The Medication Box will be sealed using a white (yellow) lock.
  3. After the Medication Box is inspected jointly by the Paramedic and ED/Pharmacy representative the Medication Box will be sealed with the green lock, from the Medication Box, bearing the number indicated on the label.
  4. When the Medication Box is opened by the Paramedic, the broken numbered green lock will be placed in the Medication Box and delivered with the used Medication Box to the replacing pharmacy.
  5. After use, and after joint inspection of the Medication Box for exchange by the Paramedic and ED/Pharmacy representative, the Paramedic will seal the Medication Box with the red lock from the Medication Box bearing the number indicated on the label.

MEDICATION BOXES:

- A. All Participating Hospitals will have Medication Boxes/A-Packs, with contents as approved by the participating Medical Control Authorities and MDHHS, available for replacement of supplies used by approved ALS Units. Replacement Medication Boxes/ A-Packs will be maintained in a locked area, under the control of hospital staff, which is available 24 hours a day, 7 days a week. This area will be located within the either Emergency Department or Pharmacy of the Participating Hospital. Appropriate record keeping and security measures are required at each exchange site to ensure that only appropriately licensed and authorized personnel have access to medications and other related supplies.
- B. Medication Boxes/A-Packs used by approved ALS units for patients transported will be replaced, at the time of the run, by the receiving hospital according to established procedure. Where the receiving facility does not participate in the Regional EMS Medication Exchange System and/or supplies are expended for a patient who subsequently is not transported, the unit will proceed immediately to the Regional Participating Hospital which provided Medical Control for the run to complete replacement. A PCR will be submitted when completed.
- C. Use of any supplies contained in the Regional Medication Box/A-Pack will be documented on the Use/Replacement Form for exchange and the PCR of the patient for whom the supplies were used. This includes any medications or supplies prepared for use but not actually administered to the patient.

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**BOX CLEANING**

- A. All empty containers, packaging and used materials will be properly disposed of by the ALS crew that used the Medication Box/A-Pack.
- B. The EMS crew using standard hard surface decontamination techniques will clean any blood or body fluid contamination to the exterior of the Medication Box.
- C. If there is blood or body fluid contamination to the interior of the Medication Box/A-Pack, or to any unused materials or packaging, the EMS crew will clean and dispose of contaminated material. If direction is needed in the cleaning and disposal of contaminated materials the crew can contact the receiving hospital pharmacy.
- D. All unused, un-contaminated supplies will be returned to the Medication Box/A-Pack.

**THE ALS CREW WILL:**

- A. For all SEM runs, complete the Use/Replacement Form contained in the Medication Box/A-Pack. The form shall serve as the permanent medical record for drugs administered, and the paramedic will document their MCA Medical Director's name when any controlled substance is used. For post-radio-controlled substance orders, document the ordering physician's name on the Replacement Form.
- B. The ALS crew is responsible for proper distribution of the completed forms.
- C. The expended Medication Box/A-Pack (cleaned as described above and red sealed) and the completed Use/Replacement Form will be presented to an appropriate member of the hospital staff who will issue a fresh Medication Box/A-Pack (green seal). A member of the ALS crew and the hospital staff member will complete the exchange log sheet.
- D. In the event that controlled substances are prepared for use and not used or the entire contents of a container are not used, the remaining medication will be appropriately wasted by ALS crew member in the presence of licensed hospital personnel/or other ALS crew member. The following will be recorded on the Use/Replacement Form:
  - 1) The name and amount of the medication wasted.
  - 2) The initials of the ALS crew member, hospital personnel or other ALS crew member witnessing the waste.
- E. All requests for information concerning the "Use/Replacement Form" by other agencies are to be directed to the appropriate Medical Control Authority.

**EXPIRATION OF DRUGS/SOLUTIONS**

- A. All items in a SEM Regional Medication Box/A-Pack will have expiration dates not less than 90 days after the Medication Box/A-Pack is prepared.
- B. Any unused items bearing expiration dates less than 90 days subsequent shall be removed from the Medication Box/A-Pack and replaced with fresh stock as described in A above.

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- C. Each Regional Medication Box/A-Pack will have a label securely attached to the outside containing the following information:
1. The name of the participating hospital pharmacy, which restocked the Medication Box/A-Pack.
  2. The date the Medication Box/A-Pack was restocked.
  3. The printed name and initial of the pharmacist and pharmacy technician that inventoried and restocked the Medication Box/A-Pack.
  4. The expiration date is the last day of the month of the earliest expiring medication (with a maximum of one year from the current date). The Medication Box/A-Pack label will include the month/day/year in the "use or replace by" section.
  5. The red and green lock numbers.
  6. The Medication Box/A-Pack number.

**MEDICATION BOXES – ALTERNATIVE PACKAGING AND SHORTAGES:**

- A. Routinely, participating hospital pharmacies must provide items only in the dosage, concentration, and packaging listed. Use of alternative vendors or manufacturers is acceptable if consistent with the required contents.
- B. For products in short supply hospital pharmacies may stock the Medication Boxes/A- Packs with less than a 90-day expiration date.
- C. When a medication in alternative packaging is the only product available, place alternative medication, use directions and supplies for medication preparation inside the Medication Box/A-Pack.
- D. Attach a sticker to the exterior top of the Medication Box or to the clear side near the bottom of the A-Pack stating the substitution.
- E. Directions for specific medications in short supply, throughout the regional exchange system will be addressed through communications with participating pharmacies as approved by the Regional Protocol participating MCAs.

**DISCREPANCIES**

**DEFINITION:** For purposes of this policy, a "discrepancy" is any breakage, expiration, shortage, theft or diversion of a Regional Medication Box/A-Pack, or any contents thereof.

- A. A standard "MEDICATION DISCREPANCY REPORT" will be completed each time a discrepancy occurs. The form may be initiated by either pre-hospital or hospital staff discovering the discrepancy. The person initiating the report will be responsible for distributing the forms as required.
- B. The Medical Control copy of discrepancy reports will be sent to the Medical Control Authority in which the discrepancy occurred, which will serve as the central filing point.
- C. A copy of the PCR for the run on which the discrepancy occurred/was discovered is to be attached to each copy of the discrepancy report where applicable.



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- D. The participating hospital pharmacist is to be notified immediately if controlled substances are involved in a discrepancy. The participating hospital pharmacist will determine if the discrepancy constitutes a diversion of controlled substances. In addition, the following are to be notified of controlled substance diversions:
1. The Medical Control Authority in which the diversion occurred.
  2. Drug Enforcement Administration (DEA)
  3. Michigan State Board of Pharmacy
  4. Appropriate local law enforcement agency (for the jurisdiction where the diversion most likely took place)
  5. Michigan Department of Health & Human Services (MDHHS).
- E. **The participating hospital pharmacist will be responsible for assuring that all appropriate notifications are made.**
- F. If, at any time, an ALS unit has less than the required stock of Medication Box/A-Pack supplies and cannot document use of these supplies in connection with a patient, a discrepancy report must be completed. The completed discrepancy report, along with a completed Use/Replacement Form indicating the EMS Provider Agency Name under "Patient Name" and clearly marked "Replacement for Missing Stock" will be presented to the agency's Base Hospital Pharmacy for replacement. The ALS agency can be held accountable for replacement.

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MEDICATION BOX CONTENTS DRUG/ITEM	CONCENTRATION	PACKAGING	QUANTITY
Acetaminophen	650 mg/20.3 mL	Unit Dose Cup	1
Adenosine	6 mg/2 mL	2 mL Vial/Syringe	3
Albuterol	2.5 mg/3 mL	3 mL Vial - UD	6
Amiodarone	150 mg/3 mL	Amp/Vial	3
Aspirin	81 mg/tablet	BT/UD – chewable	1 BT or 4 UD tabs
Atropine	1 mg/10 mL	10 mL Syringe	3
Calcium Chloride	1 g/10 mL	10 mL Syringe	2
Ceftriaxone	2gm vial	2gm vial	1
Dextrose 50%	25 g/50 mL	50 mL Syringe	1
Diphenhydramine	50 mg/1 mL	1 mL Vial	2
Epinephrine	1 mg/1 mL	1 mL Amp/ Vial	2
Epinephrine	1 mg/10 mL	10 mL Syringe	7
Fentanyl	50 mcg/mL	2 mL Vial/Amp	3
Ipratropium Bromide	0.02%	2.5 mL Vial - UD	2
Ketamine	100mg/ml	5ml Vial	1
Ketorolac	15mg/ml	1ml Vial	1
Lidocaine	100 mg/5 mL	5 mL Syringe	3
Magnesium Sulfate	1 g/2 mL	Amp/Vial	4
Methylprednisolone	125 mg	Vial	1
Midazolam	5 mg/1 mL	1 mL Vial	4
Morphine	10 mg/1 mL	1 mL Amp/Vial	2
Naloxone	2 mg/2 mL or 0.4 mg/mL	4 x 2 mL Syringe or 2 x 10 mL Vial	Total = 8mg
Nitroglycerin	0.4 mg/tab	Bottle	1
Ondansetron	2 mg/mL	2 mL Vial	2
Ondansetron ODT	4mg	Tablet	2
Prednisone	50 mg tab	50 mg Tab	1
Racepinephrine 2.25% with 3 mL NS	11.25 mg/0.5 mL	0.5 mL Vial	1
Sodium Bicarbonate	50 mEq/50 mL	50 mL Syringe	2
Sodium Chloride	0.9%	100 mL Bag	1
Sodium Chloride	0.9% Preservative Free	20-30 mL Vial or 10 mL syringes	1 2
Tranexamic Acid (TXA)	100mg/ml	10 ml Vial	1
Alcohol Pad			12
Incident Report Form			1
IV Additive Labels			3
IV Tubing with Y Site Pre-pierced Reseal	60 drops/mL(mini drip)		2
Nebulizer			1
Blunt Cannula	18 G x 1 inch		5
Filter Needle	18-21 G		3
Intranasal Mucosal Atomization Device			1
Syringe	20 mL		1
Syringe	10 mL		5
Syringe with needle/Luer Lock	1 mL		5
Syringe with needle	3 mL – 21/22 G x 1.5 inch		5
Oral Liquid Syringe	10 ml		1
Needle	18 G x 1.5 inch		3
Pediatric Needle	25 G x 1 inch		2
Red Lock			1
Replacement Form			1
Three or Four-Way Stopcock			1

NOTE: Participating hospital pharmacies must provide the above listed items only in the dosage, concentration, and packaging shown above. Use of alternative vendors or manufacturers is acceptable if consistent with the required contents

# SEM/EMS MEDICATION BOX CONTENTS AND SCHEMATIC

## Top Shelf

<p><b><u>Acetaminophen</u></b> 650 mg/ 20.3 mL Unit dose cup X 1</p>		<p><b><u>Sodium Chloride 0.9%</u></b> Preservative Free (1) 20 – 30 mL Vial or (2) 10 mL prefilled syringe</p>		<p><b><u>Misc. Supplies</u></b> Alcohol Pad – x 12 Blunt Cannula (18 G x 1 inch) – x 5 Filter Needle 18 – 21 G – x 3 IV Additive Labels x 3 Needle (18 G x 1.5 inch) – x 3 Pediatric Needle (25 G x 1 inch) x 2 Three or Four Way Stopcock x 1 Red Lock x 1</p>	
<p><b><u>Magnesium Sulfate</u></b> 1 g/ 2 mL Amp/ Vial X 4</p>		<p><b><u>Naloxone</u></b> 2mg/ 2ml Syringe x 2(+ 2 below)</p>			
		<p><b><u>Naloxone</u></b> 2 mg/ 2 mL or 0.4 mg/ mL 4 x 2 mL Syringe or 2 x 10 mL Vial Total = 8 mg</p>			
		<p><b><u>Intranasal Mucosal Atomization Device</u></b> - x 1</p>			
<p><b><u>Amiodarone</u></b> 150 mg/ 3 mL Amp/ Vial X 3</p>	<p><b><u>Adenosine</u></b> 6 mg/ 2 mL 2 mL Vial/Syringe X 3</p>	<p><b><u>Epinephrine</u></b> 1mg/ 1 mL Amp/ Vial X 2</p>	<p><b><u>Diphenhydramine</u></b> 50 mg/ 1 mL 1 mL Vial X 2</p>	<p><b><u>Aspirin 81 mg Chewable Tablet</u></b> X 1 Bottle OR 4 UD Tabs</p>	<p><b><u>Ondansetron</u></b> 2 mg/ mL 2 mL Vial X 2</p>
			<p><b><u>Tranexamic Acid 100mg/ml</u></b> 1 x 10ml vial</p>	<p><b><u>Nitroglycerin</u></b> 0.4 mg/ Tab Bottle X 1</p>	<p><b><u>Ondansetron</u></b> 4mg ODT 2 Tabs</p>

## Middle Shelf

<p><b><u>Controlled Substances</u></b></p> <p><b><u>Fentanyl</u></b> 50 mcg/ mL – 2 mL Vial/Amp x 3</p> <p><b><u>Midazolam</u></b> 5 mg/ 1 mL- 1 mL Vial x 4</p> <p><b><u>Morphine</u></b> 10 mg/ 1 mL- 1 mL Vial/Amp x 2</p> <p><b><u>Ketamine</u></b> 100mg/ml 5ml Vial x 1</p>	<p><b><u>Methylprednisolon e</u></b> 125 mg/ Vial X 1</p> <p><b><u>Prednisone</u></b> 50 mg Tablet X 1</p> <p><b><u>Ceftriaxone</u></b> 2gm vial X 1</p>	<p><b><u>Ipratropium Bromide 0.02 %</u></b> 2.5 mL Vial – UD X 2</p> <p><b><u>Ketorolac</u></b> 15mg/ml Vial X 1</p>	<p><b><u>Albuterol</u></b> 2.5 mg/ 3 mL 3 mL Vial – UD X 6</p>	<p><b><u>Nebulizer</u></b> X 1</p> <p><b><u>Racpinephrine</u></b> 2.25 % 11.25 mg/ 0.5 mL 0.5 mL Vial X 1 3 mL NS X 1</p>
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## Bottom Shelf

<p><b><u>Bag of Syringes</u></b> Syringe (With needle/ Luer Lock) – 1 mL x 5 Syringe 3 mL (21/ 22 G x 1.5 inch) – 3 mL x 5 Syringe – 10 mL x 5 Syringe – 20 mL x 1</p> <p><b><u>Lidocaine</u></b> 100 mg/ 5 mL – 5 mL Syringe x 3</p> <p><b><u>Calcium Chloride</u></b> 1 g/ 10 mL – 10 mL Syringe x 2</p> <p><b><u>Atropine</u></b> 1 mg/ 10 mL – 10 mL Syringe x 3</p> <p><b><u>Sodium Chloride</u></b> 0.9 % - 100 mL Bag x 1</p>	<p><b><u>Sodium Bicarbonate</u></b> 50 mEq/ 50 mL – 50 mL Syringe x 2</p> <p><b><u>Dextrose 50%</u></b> 25 g/ 50 mL – 50 mL Syringe x 1</p>	<p><b><u>Epinephrine</u></b> 1 mg/ 10 mL – 10 mL Syringe x 7</p> <p>IV Tubing With Y Site Pre-pierced Reseal - 60 drops/mL (mini drip) x 2</p> <p><b><u>Forms</u></b> Replacement/ Schematic/ Incident-Discrepancy</p>
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**Version: 37 – July 2022 (Discard all previous versions) Needleless stock only!**

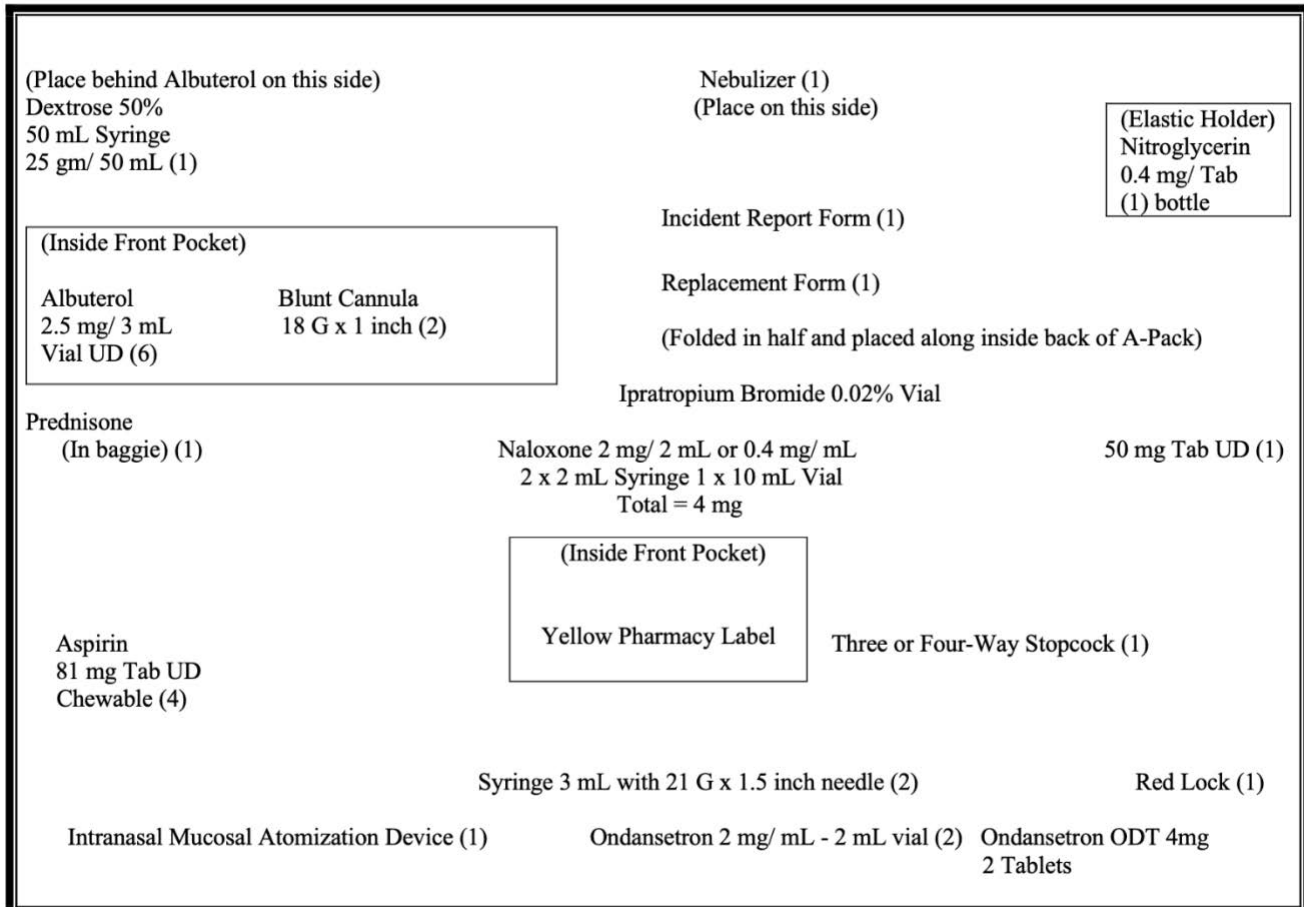
## SEM/EMS ACCESSORY PACK (A-PACK) CONTENTS

**Version: 37 – July 2022 (Discard all previous versions) Needleless stock only!**

DRUG/ITEM	CONCENTRATION	PACKAGING	QUANTITY
Albuterol	2.5 mg/ 3 mL	3 mL Vial – UD	6
Aspirin	81 mg/Chewable tablet	UD Tabs	4
Dextrose 50%	25 g/50 mL	50 mL Syringe	1
Intranasal Mucosal Atomization Device			1
Ipratropium Bromide (in baggie)	0.02%	2.5 mL Vial – UD	1
Naloxone	2 mg/2 mL or 0.4 mg/mL	2x2 mL Syringe or 1x10 mL Vial	Total = 4 mg
Nitroglycerin	0.4 mg/ Tab	Bottle	1
Nebulizer			1
Ondansetron	2 mg/ mL	2 mL Vial	2
Ondansetron ODT	4mg	Tablet	2
Prednisone	50 mg tab	50 mg Tab	1
Blunt Cannula	18 G – 1 inch		2
Syringe 3 mL with needle	21/22 G x 1.5 inch needle		2
Red Lock			1
Replacement Form			1
Incident Report Form			1
Three or Four-Way Stopcock			1

### SEM/EMS ACCESSORY PACK (A-PACK) SCHEMATIC

**Green Lock through zipper and eyelet**



# SEM/EMS MEDICATION BOX/PACK INCIDENT/DISCREPANCY FORM

If there is any discrepancy with the contents of this Medication Box or A-Pack, this form **MUST** be filled out by the person(s) who discover the discrepancy. **The participating hospital pharmacist is to be notified immediately if controlled substance(s) are involved in a discrepancy.** The pharmacy must send the form and any supporting documentation to **THE PARTICIPATING MEDICAL CONTROL AUTHORITY WHERE THE INCIDENT/DISCREPANCY OCCURRED.**

**Version: 37 – July 2022** (Discard all previous versions)

EMS Agency or Hospital Name:		Date Discovered:	
Reporting Individual(s) Name(s):			
Witness to Discrepancy:			
<b>TYPE</b>	<b>BOX OR PACK #</b>	<b>RED SEAL #</b>	<b>GREEN SEAL #</b>
<input type="checkbox"/> EMS MEDICATION BOX			
<input type="checkbox"/> A-PACK			
<input type="checkbox"/> OTHER			
<b>RESTOCKING INFORMATION</b>		<b>RECEIVING INFORMATION</b>	
Date Last Restocked:		Receiving Hospital:	
Restocking Hospital:		Receiving Pharmacist:	
Phone #		Phone #	
<b>PLEASE INDICATE THE NATURE OF THE ISSUE</b>			
<input type="checkbox"/> CONTROLLED SUBSTANCE DISCREPANCY (MUST COMPLETED SECTION BELOW)			
<input type="checkbox"/> DAMAGED MEDICATION CONTAINER			
<input type="checkbox"/> STOCKING ISSUE (MED/SUPPLY)			
<input type="checkbox"/> CLEANING ISSUE			
<input type="checkbox"/> DAMAGED EMS MEDICATION BOX/A-PACK			
<input type="checkbox"/> OTHER			
<b>MEDICATION</b>	<b>DESCRIPTION STRENGTH/SIZE/VOLUME</b>	<b>QUANTITY # OF VIALS/AMPS</b>	<b>DISCREPANCY MISSING/BROKEN</b>
<input type="checkbox"/> Fentanyl			
<input type="checkbox"/> Morphine			
<input type="checkbox"/> Midazolam			
<input type="checkbox"/> Naloxone			
<input type="checkbox"/> Ketamine			
<b>EMS RUN INFORMATION</b>			
<b>EMS AGENCY</b>	<b>UNIT #</b>	<b>RUN #</b>	<b>MCA</b>
<b>ADDITIONAL INFORMATION REGARDING MEDICATION BOX/PACK INCIDENT/DISCREPANCY</b>			

This document can be faxed/emailed to the appropriate MCA: **Detroit East** [info@demca.org](mailto:info@demca.org); **Genesee** 810-262-2556; **HEMS** [mail@hems.org](mailto:mail@hems.org) or 734-727-7281; **Lapeer** 810-664-0681; **Macomb** [ems@mcemsmca.org](mailto:ems@mcemsmca.org); **Monroe** [Joella.Cousino@ProMedica.org](mailto:Joella.Cousino@ProMedica.org); **Oakland** [ems@ocmca.org](mailto:ems@ocmca.org); **St. Clair** 810-985-3012; **Washtenaw/Livingston** [WashtenawLivingstonMCA@washtenaw.org](mailto:WashtenawLivingstonMCA@washtenaw.org)

## **SOUTHEAST MICHIGAN (SEM) REGIONAL**

### **MEDICATION BOX/A-PACK AND IV EXCHANGE PROCEDURES**

#### **PLEASE POST IN ALL MEDICATION EXCHANGE AREAS**

- STEP 1:** EMS Personnel must complete a SEM Med Box/A-Pack/IV Supply Use/Replacement Form and/or the SEM IV Supply Use/Replacement Form (EMS Run Report – Genesee County MCA). All information must be complete. Used Medication Boxes/A-Packs must be cleared of contaminated items, cleaned, and sealed appropriately.
- STEP 2:** Hospital staff reviews form for completeness and receiving prescriber signature (only required for cases in which controlled substances are used). Staff unlocks cabinet and allows removal of appropriate supplies. Both EMS personnel and hospital staff complete the Medication Box/A-Pack and IV Supply Exchange Log. Both EMS and hospital staff ensure that the correct Medication Box/A-Pack numbers are recorded.
- STEP 3:** The original copy of the SEM Medication Box/A-Pack/IV Supply Use/Replacement Form shall be left in the MCA cabinet. Because the hospital staff person must review the documentation form, it may not be able to be placed in the Medication Box/A-Pack before it is sealed. It will be necessary for the pharmacist to collect all separated Documentation Logs that are stored in the cabinet, when restocking drug boxes.
- STEP 4:** The MCA cabinet must be re-locked when the exchange is complete.

#### **THESE PROCEDURES ALSO APPLY WHEN ONLY AN IV FLUID/SUPPLY EXCHANGE IS COMPLETED.**

NOTE: Receiving Prescriber: Physician, P.A., N.P.

DATE	AGENCY NAME	EMS AGENCY RUN #	HOSPITAL RECEIVING STAFF	# OF BOX/A-Pack-IN	# OF BOX/A-Pack-OUT	IV REPLACEMENT YES OR NO

**SEM/EMS REGIONAL PHARMACY EXCHANGE LOG**



**SEM MED BOX/A-PACK SUPPLY USE/REPLACEMENT FORM** **Version 37- July 2022**

Witness: \_\_\_\_\_ Medic: \_\_\_\_\_

AGENCY: \_\_\_\_\_ HOSPITAL: \_\_\_\_\_  
DATE: \_\_\_\_\_

UNIT #: \_\_\_\_\_ INCIDENT #: \_\_\_\_\_ EMS CREW (Names): \_\_\_\_\_

Patient Name: \_\_\_\_\_  
Patient DOB: \_\_\_\_\_

MEDICATION	UNIT/SIZE	QNTY	USED	NOTE
Acetaminophen 650 mg/20.3 mL 10 ml oral syringe in bag	Unit dose cup	1		
Adenosine 6 mg/2 mL	Vial/Syringe 2 mL	3		
Albuterol 2.5 mg/3 mL*	Vial – UD 3 mL A-Pack	6 6		
Amiodarone 150 mg/3 mL	Amp/Vial	3		
Aspirin 81 mg chewable tablets*	X 1 Bottle or 4 UD Tabs A-Pack	1 4		
Atropine 1mg/10 mL	Syringe 10 mL	3		
Calcium Chloride 1 g/10 mL	Syringe 10 mL	2		
<b>Ceftriaxone 2gm</b>	<b>2gm vial</b>	<b>1</b>		
Dextrose 50% 25 g/50 mL*	Syringe 50 mL A-Pack	1 1		
Diphenhydramine (Benadryl) 50 mg/1 mL	Vial 1 mL	2		
Epinephrine 1 mg/1 mL	Amp/Vial 1 mL	2		
Epinephrine 1 mg/10 mL	Syringe 10 mL	7		
Ipratropium Bromide 0.02% (In Baggie)*	2.5 mL Vial – UD A-Pack	2 1		
Ketorolac 15mg	1ml Vial	1		
Lidocaine 100 mg/5 mL	Syringe 5 mL	3		
Magnesium Sulfate 1 g/2 mL	Amp/Vial	4		
Methylprednisolone 125 mg	Vial	1		
Naloxone* 2 mg/2 mL or 0.4 mg/mL Drug Box	4 x 2 mL Syringe or 2 x 10 mL Vial Total = 8 mg	4 2		
Nitroglycerin* 0.4 mg/tab	Bottle A-Pack	1 1		
Ondansetron mg/mL*	2 2 mL vial	2		
Ondansetron 4mg ODT*	4mg tab	2		
Prednisone 50 mg tab*	50 mg. tab A-Pack	1 1		
Racpinephrine 2.25% 11.25 mg/0.5 mL	0.5 mL Vial & 3mL NS	1		
Sodium Bicarbonate 50 mEq/50 mL	Syringe 50 mL	2		
Sodium Chloride 0.9% (Preservative free)	Vial 20-30 mL or 10mL syringe	1 2		
Sodium Chloride 0.9%	Bag 100 mL	1		
Tranexamic Acid (TXA) 100mg/ml	10ml vial	1		
CONTROLLED SUBSTANCES	UNIT/SIZE	QTY/ DOSE	DOSE GIVEN	DOSE WASTED
Fentanyl 50 mcg/ mL	Vial/Amp 2 mL	3		
Midazolam 5 mg/1 mL	Vial 1 mL	4		
Morphine 10 mg/1 mL	Vial/Amp 1 mL	2		
Ketamine 100mg/ml	Vial 5ml	1		

**Needleless stock only!** \* Items in both Medication Box and A-Pack

MISCELLANEOUS	UNIT/SIZE	QNTY	USED	NOTE
Alcohol Pads		12		
Incident Report Form*	A-Pack	1 Each		
IV Additive Labels		3		
IV Tubing 60 drops/mL (Minidrip) with Y Site Pre-Pierced Reseal		2		
Nebulizer*	A-Pack	1 Each		
Blunt Cannula 18 g – 1 inch *	18 G x 1 inch A-Pack	5 2		
Filter Needle	18-21 G	3		
Intranasal Mucosal Atomization Device*	A-Pack	1 Each		
Red Lock*	A-Pack	1 Each		
Replacement Form*	A-Pack	1		
Syringe 1mL (With needle/Luer Lock)	Syringe 1 mL	5		
Syringe 10 mL	Syringe 10 mL	5		
Syringe 20 mL	Syringe 20 mL	1		
Needle	18 G x 1.5 inch	3		
Pediatric Needle	25 G x 1 inch	2		
3 or 4-Way Stopcock*		1 Each		
Syringe w/ needle 3 mL– 21/22 G x 1.5 inch*	Syringe 3 mL A-Pack	5 2		

Replacing Hospital: \_\_\_\_\_

MCA Medical Director's Name or post radio ordering physician: \_\_\_\_\_

(Controlled Substance use only) PRINT NAME \_\_\_\_\_

Date: \_\_\_\_\_

**PARAMEDIC'S STATEMENT**

SEM EMS Medication Box number \_\_\_\_\_ has been opened and the above noted medication(s) used as prescribed. I accept pharmacy sealed SEM EMS Medication Box Number \_\_\_\_\_ sealed with breakaway tag number \_\_\_\_\_

Paramedic Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**RECEIVING PHARMACIST'S STATEMENT for RETURNED BOX**

The controlled substance (C.S.) contents of the SEM EMS Medication Box number \_\_\_\_\_ has been reviewed. The Supply Use/Replacement form reflects the C.S. contents missing have been documented as administered by the Paramedic returning the box, C.S. contents not documented as administered are in the box in the correct concentration, dosage form, volume, and quantity per Medical Control Authority policy.

Name of Pharmacist on the Seal: \_\_\_\_\_

Name (Print)/Sig. of Receiving Pharmacist: \_\_\_\_\_

Date: \_\_\_\_\_ Hospital: \_\_\_\_\_

**Documentation of Controlled Substance Waste (Please Print)**

**SEM A-PACK SUPPLY USE/REPLACEMENT FORM**

Date: \_\_\_\_\_ Agency Name: \_\_\_\_\_ Unit #: \_\_\_\_\_ Inc. #: \_\_\_\_\_

Crew Names: \_\_\_\_\_

Replacing Hospital: \_\_\_\_\_

MEDICATION	UNIT/SIZE	QNT Y	USE D
Albuterol 2.5 mg/ 3 mL	Vial – UD 3 mL	6	
Aspirin 81 mg tablets	Chewable UD Tablets	4	
Dextrose 50% 25 g/50 mL	Syringe 50 mL	1	
Ipratropium Bromide 0.02% (In Baggie)	2.5 mL Vial – UD	1	
Naloxone 2 mg/2 mL or 0.4 mg/mL	2 x 2 mL Syringe or 1 x 10 mL Vial	4 mg	
Nitroglycerin 0.4 mg/tab	Bottle	1	
Ondansetron 2 mg/mL	2 mL Vial	2	
Ondansetron ODT	4mg Tablet	2	
Prednisone	50 mg Tablet	1	
Nebulizer		1	
Blunt Cannula	18 G x1 inch	2	
Intranasal Mucosal Atomization Device		1	
Syringe w/needle 3 mL x 21/22 G x 1.5 inch	Syringe 3 mL	2	
3 or 4-Way Stopcock		1	
Red Lock		1	
Replacement/Incident	Forms	1ea	

**Paramedic's Statement**

**SEM EMS A-Pack # \_\_\_\_\_ has been opened and the noted medication(s) used as prescribed. I accept pharmacy sealed SEM EMS A-Pack # \_\_\_\_\_ sealed with breakaway # \_\_\_\_\_.**

**Patient Name:** \_\_\_\_\_

**Patient DOB:** \_\_\_\_\_

**Paramedic Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Replacing Pharmacist's Statement**

**The medication(s) in the sealed SEM EMS A-Pack # \_\_\_\_\_ has been distributed according to the Medication/Use and Replacement Policy of the participating MCA. All Medications are in the correct concentration, dosage, form, volume, amount, and not expired.**

**Signature of Replacing Pharmacist:** \_\_\_\_\_

**Hospital:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Initial Date: 05/31/2012  
Revised Date: 02/15/2023

Section 9-7

## ***Epinephrine Auto-Injector Procedure***

**Aliases:** Epi-Pen ®

**Purpose:** To outline the use and resupply of epinephrine auto-injector/pediatric epinephrine auto-injector by authorized prehospital providers for life-threatening anaphylaxis and respiratory emergencies as outlined in applicable treatment protocols. Providers must be licensed at or above the Emergency Medical Technician level unless otherwise specified by MCA selection.

**MCA Approval of Epinephrine Auto-injector for Select MFR Agencies**

YES                       NO

MCAs will be responsible for maintaining a roster of the agencies choosing to participate and will submit roster to MDHHS

### **1. Indications**

- A. Life-threatening allergic/anaphylactic and respiratory emergencies
- B. Use is outlined in applicable treatment protocol

### **2. Contraindications**

- A. No absolute contraindications to life-threatening allergic/anaphylactic emergencies as described in applicable treatment protocols.

### **3. Cautions**

- A. Use with caution in patients with heart disease, high blood pressure, and stroke.



- B. Contact Medical Control if child appears to weigh less than 10 kg (approx. 20 lbs.) prior to administration if possible.

### **4. Technique**

- A. **Epinephrine auto-injector** is an auto-injector that injects medication into the intramuscular tissue when the device is pushed against the skin. Injection is to be done at the anterolateral portion of the thigh.

#### B. Dosing:

- i. **Epinephrine auto-injector** (0.3 mg) is used for patients weighing over 30 kg (approx. 60 lbs.)
- ii. **Pediatric epinephrine auto-injector** (0.15 mg) is used for patients weighing between 10-30 kg (approx. 20-60 lbs.)



- iii. Contact Medical Control if child appears to weigh less than 10 kg (approx. 20 lbs.), prior to **pediatric epinephrine auto-injector** administration, if possible

- C. Instructions for use are pictured on the side of each auto-injector.
- D. The auto-injector must be held in place for ten (10) seconds once the needle injects into the thigh.

Initial Date: 05/31/2012

Revised Date: 02/15/2023

Section 9-7

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**5. Documentation**

- A. EMS providers will document any changes in the patient's condition and report those changes to on-line medical control.
- B. Complete the Epinephrine Auto-injector Utilization Form as required by MCA.

**6. Accountability**

- A. **Epinephrine auto-injectors** will be stored in a secured compartment in a temperature-controlled area of the EMS vehicle.
- B. **Epinephrine auto-injectors** must be restocked at the pharmacy or through other Medical Control approved process in conformity with current pharmacy laws and the public health code. Utilization forms must be completed for each use.



**Michigan**  
**MEDICATION SECTION**  
**EPINEPHRINE AUTO-INJECTOR PROCEDURE**

Initial Date: 05/31/2012  
Revised Date: 02/15/2023

Section 9-7

Epinephrine auto-injector Utilization Form  
(To be used by Hospital)

<u>Drug</u>	<u>Standard</u>	<u>Quantity</u>	<u>Count</u>	<u>Exp. Date</u>
Epinephrine auto-injector	0.3 mg	1	_____	_____
Pediatric Epinephrine auto-injector	0.15 mg	1	_____	_____

Run Date \_\_\_\_\_

Patient Name \_\_\_\_\_

Physician \_\_\_\_\_

EMT or MFR \_\_\_\_\_

Receiving Hospital \_\_\_\_\_

**Michigan**  
**MEDICATION SECTION**  
**NALOXONE LEAVE BEHIND MEDICATION KIT CONTENTS**  
**AND DISTRIBUTION PROCEDURE**  
**(MCA Optional Protocol)**

Initial Date: 6/26/20

Revised Date: 02/13/2023

Section 9-8

***Naloxone Leave Behind Medication Kit Contents and Distribution Procedure (MCA OPTIONAL)***

Medical Control Authorities choosing to adopt this supplement may do so by selecting this check box. Adopting this supplement changes or clarifies the referenced protocol or procedure in some way. This supplement supersedes, clarifies, or has authority over the referenced protocol.

- I. Medications and supplies for naloxone kits will be supplied by participating pharmacies or the MCA
- II. Assembly, labeling, and access to kits will be done according to the **Pharmacy, Drug Box and IV Supply Exchange Procedure.**
- III. Overdose Medication Kit Contents List

Medication / Item	Concentration	Packaging	Quantity
Naloxone (Narcan)	4mg / spray	Nasal Spray	1
MDHHS Safety Advice for Patient and Family Members Card			1
Resuscitation Face shield*			1* *(MCA Optional)
Replacement Form			1
Local Treatment Resources Form			1

- IV. Procedure
  - A. Each participating EMS Agency will stock each of its licensed vehicles with 2 Naloxone Medication Kits. After deployment, the naloxone medication kit will be replaced within 24 hours at the assigned stocking hospital pharmacy.
  - B. Kits will be stored on the EMS vehicle in a secure way, not accessible to the public.
  - C. Deployment of a Naloxone Medication Kit will be documented the patient care record and uploaded to the Michigan EMS Information System.
  - D. The replacement/use form will be completed and returned to the designated hospital pharmacy for dispensing of a replacement Naloxone Kit.