



CHECK & INJECT (MA)



Intramuscular Epinephrine

Training Guide (BLS)

UPDATED: May 2018

PRO*EMS

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Training Manual

Contact Information

- If you have any questions or concerns; please contact Gibson McCullagh at Pro EMS (gmccullagh@proems.com / 617-682-1810)

Overview of EMT training:

- Didactic Classroom 30 mins
- Skills Lab 30 mins
- Simulation Participation 30 mins
- MD/Designee Sign-off

Continuing Education Credit:

- **This only applies for courses being taught by Pro EMS. If your course is not being taught by Pro EMS, please contact your region for separate approval.**
- EMTs and Paramedics participating in the AHMD-option are eligible for continuing education credit (EMTs, 1.5hrs; Paramedics 1hr).
- In order to obtain credit, any participating EMT/paramedic must sign an OEMS roster (available at <http://www.mass.gov/eohhs/docs/dph/emergency-services/forms/continuing-education-attendance-roster.pdf>). The course number is CAPCE: 18-ProEMS-F2-0004.
- Course attendance rosters must be submitted to Gibson McCullagh (originals only, all fields must be complete).

Didactic Classroom (30mins):

- **Required materials:** AV equipment & internet connection
- The recorded lecture is available on Prodigy. It includes an overview of the project & rationale, a protocol review, a clinical review, CQI, and an overview of the kit,
- There is a quiz at the end of the course. Please have all quizzes turned in with the roster.

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Skills Lab (30mins):

- **Required materials:** Check & Inject Training Kit, spare VanishPoint needles, oranges/lemons (halved), cup of water (for refilling vial)
- After the presentation, we recommend performing the skill to the group prior to having individuals try.
- A reminder of the breakdown:

1. Open the kit and review the contents including the Check & Inject MA form
2. Demonstrate site selection on a student on mannequin
3. Wipe the injection surface with alcohol pad in circular motion – allow to dry
4. Verify the drug – correct drug, expiration date has not passed, clear in color
5. Review the volume required for adult AND pediatric
6. Instruct participants to plan for administration of either an adult or pediatric dose
7. Practice preparing (drawing) the dose into the syringe:
 - a) Remove syringe from packaging
 - b) Pull plunger out until stopper passes desired dosing mark
 - c) Uncap vial, invert vial, and insert needle just through stopper (visible inside vial)
 - d) Depress plunger, injecting air into vial (Caution: Plunger may push back slightly)
 - f) Draw the plunger back beyond the desired dose
 - Drug should fill the syringe; minimizing air in syringe by keeping needle tip immersed in fluid
 - g) Remove needle from vial
 - h) Holding the syringe with needle upright, tap syringe to move air to the top (needle end)
 - i) Expel air and/or excess drug until plunger returns to the desired dose
 - j) Check to ensure no excessive air is present in the syringe
 - If air is present, return to (step c) and repeat the process, using the original vial
8. Practice intramuscular (IM) injection (**ensure individuals are using oranges and not their partner at this step**)
 - a) Insert needle at 90 degree angle, with a quick, dart-like action
 - b) Push plunger to administer dose
 - c) Remove needle quickly and press auto-retract-cap using one hand technique
 - d) Dispose of needle and syringe in proper sharps container
 - e) Massage site
 - f) Place adhesive bandage on site
9. Reassess and document – provider must verbalize the following steps
 - a) Reassure patient, observe response, observe side effects
 - b) Continue to follow regional anaphylaxis protocols
 - c) Vital signs every 5 minutes
 - d) Update ALS
 - e) Document (complete the form)

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Simulation Participation (30mins):

- **Required materials:** Check & Inject Training Kit, spare VanishPoint needles, oranges/lemons (halved), cup of water, BLS medical kit, patient volunteer
- After everyone has completed the skills session and is comfortable with the administration of the IM epinephrine as well as the kit, each individual should participate in 2-3 simulation scenarios to demonstrate competency.
- For these simulations, we recommend placing the training kit temporarily in your BLS medical kit (or wherever you store your BLS medications).
- You will need 1 patient volunteer per scenario. Please note that providers should still use oranges/lemons to demonstrate the actual injection. The patient volunteer is to simulate patient presentation only.
- It is acceptable (and encouraged) to allow non-participating group members to observe the simulation as it occurs.
- Scenarios are listed on the next page. Perform any necessary remediation as needed. Restock the kit and refill vial between uses with water.

MD/Designee Sign-Off:

- Once everyone in the Department has completed the above outlined training, your AHMD will give the final approval, and the appropriate number of LIVE kits will be delivered.

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BLS Scenario 1

- 63 year old female at home in bed
- Patient had recently returned from dinner; while changing patient noticed hives across her chest and back
- Known allergy to shellfish but denies ordering any seafood for dinner
- Does not have a prescription for Epi-Pen
- On your arrival you note audible wheezing as soon as you enter her room; on inspection you note diffuse hives and swelling across her chest, back and neck.
- Vital Signs:
 - HR: 114
 - RR: 30
 - BP: 104/50
 - LS: Wheezes in all fields; respirations shallow; retractions noted
 - LOC: Alert & oriented
- **Outcome:** Patient should immediately receive Epinephrine as patient is showing signs of anaphylactic shock (hypotensive with respiratory compromise). Patient should receive adult dosing (0.3mg) IM in her deltoid. 5 mins after administration, you note improved respiratory effort. You meet ALS en-route to the hospital.

BLS Scenario 2

- 41 year old male at a Chinese restaurant with severe nausea and abdominal pain
- Patient has known peanut allergy and believes he may have accidentally ingested peanuts
- Patient has a prescription for Epi-Pen but left at home
- On your arrival you find the patient double over with severe abdominal pain. You also note edema to his tongue.
- Vital Signs:
 - HR: 120
 - RR: 40
 - BP: 88/56
 - LS: Increased work of breathing, no wheezes noted
 - LOC: Alert & oriented
- **Outcome:** Patient should immediately receive Epinephrine as patient is showing signs of anaphylactic shock (hypotensive; severe abdominal pain; edema to tongue). Patient should receive adult dosing (0.3mg) IM in his deltoid. 5 mins after administration, you note no improvement and should consider giving a second dose. After the second dose, the patient reports feeling better and you note less edema of the tongue.

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BLS Scenario 3

- 14 year old male playing baseball when stung/bitten by unknown insect to neck
- Sting/bite occurred approximately 20mins prior to EMS arrival
- Has a prescription for an Epi-Pen (for bee stings) but does not have it with him
- Some pain around site with some swelling
- Vital Signs:
 - HR: 92
 - RR: 24
 - BP: 136/66
 - LS: Clear bilateral, air moving well
 - LOC: Alert & Oriented
- **Outcome:** Patient should not receive Epinephrine as patient is stable (good BP, no respiratory compromise). En-route to hospital, continue to monitor patient, especially for hypotension and/or respiratory distress.

BLS Scenario 4

- 2 year old female at daycare
- The class had just finished snack time when the caregiver noted that a child was lethargic with a rash around her mouth. The child had just had a few handfuls of strawberries. The child is hard to rouse. The caregiver calls 911
- The child's parents never noted an allergy.
- On your arrival the caregiver is running out to the ambulance with the child in her arms. The child appears to have no muscle tone and is lying limp. You immediately put her in the back of the ambulance.
- Vital Signs:
 - HR: 66
 - RR: 12
 - BP: Unable to obtain; capillary refill is > 4 seconds
 - LS: Faint; wheezes noted
 - LOC: Unresponsive to painful stimuli
- **Outcome:** Patient should immediately receive Epinephrine as patient is showing signs of anaphylactic shock (likely allergen; hypotensive with respiratory compromise and skin involvement). Patient should receive pediatric dosing (0.15mg) IM in her deltoid. You should also assist with her respirations at this point. Minutes after administration, you note patient begins to cry forcefully. ALS arrives and you transport the patient to the hospital with noted improvement en-route.