



UNIVERSITY OF  
**NORTHERN COLORADO**

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**Environmental Health and Safety**

# **Automated External Defibrillator (AED), Bleeding Control, Naloxone and Epinephrine Auto-Injector Program**

**November 2024**



UNIVERSITY OF  
**NORTHERN COLORADO**

**Environmental Health and Safety**

## **Automated External Defibrillator (AED), Bleeding Control, Naloxone and Epinephrine Auto-Injector Program**

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## **Automated External Defibrillator (AED), Bleeding Control, Naloxone and Epinephrine Auto-Injector Program**

### **I. Introduction**

This policy outlines the University of Northern Colorado's Automated External Defibrillator (AED), Bleeding Control, and Naloxone program. It defines roles and responsibilities, storage, maintenance, and training to ensure program compliance.

### **II. Purpose**

According to the American Heart Association, each year 950,000 Americans die from cardiovascular disease, making it the number one cause of death in the U.S. At least 300,000 people die of sudden cardiac arrest before they reach the hospital. Approximately 74% of people would survive sudden cardiac arrest if bystanders call 911 and begin CPR and if trained responders provide defibrillation within minutes. For every minute without CPR and defibrillation, the odds of survival decrease by seven to 10 percent.

An Automated External Defibrillator (AED) is a portable defibrillator used to deliver an electric shock to a person suffering sudden cardiac arrest. It is only to be applied to unconscious victims, not breathing normally, and showing no signs of circulation such as normal breathing, coughing, or movement. The AED will analyze the heart rhythm and advise the operator if a shockable rhythm is detected. If a shockable rhythm is detected, the AED will charge to the appropriate energy level and deliver a shock. AEDs are easy to operate and guide users with voice prompts.

Uncontrolled bleeding is the number one cause of preventable death from trauma. The greater the number of people who know how to control bleeding in an injured patient, the greater the chances of surviving that injury until help arrives.

With the growth of opioid-related deaths in the U.S. naloxone can offer life-saving treatment until emergency medical technicians can arrive on the scene. Naloxone can help prevent respiratory and central nervous system depression. With the addition of naloxone on campus, we aim to get it into the hands of people who are most likely to be on the scene of an overdose so they can start the process of reviving the person before paramedics or law enforcement arrive.

### **III. Regulations**

CRS 13-21-108 (Good Samaritan Law) states that a person rendering emergency assistance is exempt from liability. (1) Any person licensed as a physician and surgeon under the laws of the state of Colorado, or any other person, who in good faith renders emergency care or emergency assistance to a person not presently his patient without

compensation at the place of an emergency or accident, including a health care institution as defined in section 13-64-202 (3), shall not be liable for any civil damages for acts or omissions made in good faith as a result of the rendering of such emergency care or emergency assistance during the emergency unless the acts or omissions were grossly negligent or willful and wanton.

CRS 18-1-711 (911 Good Samaritan Law) states that a person is immune from criminal prosecution for an offense when the person reports, in good faith, an emergency drug or alcohol overdose even to a law enforcement officer, to the 911 system, or a medical provider. This same immunity applies to persons who remain at the scene of the event until a law enforcement officer or an emergency medical responder arrives, or if the person remains at the facilities of the medical provider until a law enforcement officer, emergency medical responder, or medical provider arrives. The immunity described above also extends to the person who suffered an emergency drug or alcohol overdose event.

CRS 18-1-712 (Third Party Naloxone) This law allows for a person other than a health care provider or health care facility who acts in good faith to administer naloxone to another person whom the person believes to be suffering an opiate-related drug overdose. The individual who administers naloxone shall be immune from criminal prosecution for such an act. Amended July 13, 2020, to extend immunity to individuals administering expired naloxone.

All university policies and procedures laid out in the student or faculty handbook or on the university website are still in effect.

#### **IV. Responsibilities**

##### **Medical Advisor**

In accordance with CRS 13-21-108, a physician licensed to practice medicine in the State of Colorado will oversee the University of Northern Colorado's AED program.

The Medical Advisor for UNC is Dr. Paul Branch. The Medical Advisor is responsible for:

- Providing medical direction for the use of the AED
- Writing prescriptions for the AED
- Reviewing and approving guidelines for emergency procedures related to the Campus AED units
- Evaluation of post-event review forms and digital files downloaded from the AED

##### **Program Coordinator**

The Environmental Health & Safety (EHS) Department will oversee the UNC AED, Bleeding Control, and Naloxone program. EHS shall be responsible for maintaining devices to meet regulatory compliance, the standards of the manufacturer, the programmatic standards of the American Heart Association or the American Red Cross, and the UNC program. EHS shall:

- Coordinate AED, Bleed Control Kit, and naloxone equipment location with Building Coordinators
- Ensure that Building Coordinators are conducting inspections promptly and in accordance with written user and service manuals provided by the manufacturer.
- Conduct semi-annual inspections to include cabinet battery replacement and operational checks, replacement of pads and batteries, ensure proper operation of AED and bleed control units, and replace naloxone as necessary.
- Maintain AED, Bleed Control Kit, and naloxone inspection records.
- Replace batteries, pads, and other supplies as needed
- Maintain and provide an inventory of AED, Bleed Control Kit, and naloxone locations on campus
- Maintain National AED Registry for emergency communication centers
- Monitor updates to regulations
- Conduct incident debriefing and complete and review follow-up reports.

### **Building Coordinators**

Building Coordinators will assist with AEDs, Bleeding Control Kits, and naloxone in their assigned building or area. To meet regulatory compliance, standards of the manufacturer, program standards of the American Red Cross, and the UNC program, Building Coordinators assist with:

- Serve as contact for the AED, Bleed Control Kit, and naloxone program coordinator
- Include the AED, Bleeding Control Kits, and naloxone in the building emergency response plan
- Provide monthly inspections of the AED unit, Bleeding Control Kits, and naloxone (see Inspection Form, Appendix A)
- Notify EHS within 24 hours of an incident.
- Have an opportunity to participate in voluntary training programs.

### **V. Maintenance & Inspections**

Maintenance needed on AED units, Bleeding Control Kits, and naloxone shall be reported to the EHS Department. The EHS Department shall ensure maintenance is completed.

Inspections shall be performed on all AED units, Bleeding Control Kits, and naloxone. Monthly inspections will be conducted by the Building Coordinator and Custodial personnel.

Exception:

- The UNC Police Department will conduct inspections on their AED units located in the patrol vehicles.
- The Athletics Training Department will conduct inspections on the traveling AEDs.

Inspection forms shall be completed monthly and a copy shall be sent to the EHS department.

Naloxone will be disposed of through Larimer Health District. Contact is MJ Jorgensen ([mjorgensen@healthdistrict.org](mailto:mjorgensen@healthdistrict.org)). They will pick up expired or unused kits from UNC.

## **VI. Post Incident**

When a Zoll AED is used local paramedics shall take the device with the patient and provide a temporary loaner AED until the unit that was deployed is functional. Local paramedics shall also provide data from AED devices to EHS which shall retain one copy and send a copy to the University Medical Director. EHS will be responsible for following the manufacturer's suggestions for maintenance of the AED after an incident, such as replacing electrodes and batteries. Bleeding Control kits are disposable and all material from kits will be placed in Bio-Hazard bags for proper disposal. EHS will replace Bleeding Control kits and naloxone, as needed.

## **VII. Training**

EHS can assist with providing training for employees who may be operating AED units. This would include but is not limited to: UNC Police Department officers, Building Coordinators, Custodial personnel, and Athletic Trainers. Stop the Bleed training may also be provided or offered through our partnership with Banner Health, UC Health, and [stopthebleed.org](http://stopthebleed.org). Each department that requires AED training shall maintain training documentation for each employee for a minimum of three years. Naloxone training may be provided by UNC or offered through partnerships with Northern Colorado Health Network and Safe annually for building coordinators. In addition, the Campus Recreation Center offers CPR/First Aid training. This includes the use of AED and some examples of how to use a bleed kit.

## VIII. Locations of AEDs and Bleeding Control Kits

AED units are in the following locations (bleeding control kits are placed alongside some AED units and Naloxone is placed inside all AED boxes):

<u>UNC Building</u>	<u>Building Address</u>	<u>Location of AED Unit</u>	<u>Bleed Kit</u>
Arlington Park Apartments	2315 9 <sup>th</sup> Avenue	Building 1 across from the main office	Same Location
Arts Annex	1843 8 <sup>th</sup> Avenue	1 <sup>st</sup> Floor North Entrance	Same Location
Ben Nighthorse Campbell Center	913 9 <sup>th</sup> Street	Entryway to Room 1300	Same Location
Brown Hall	901 19 <sup>th</sup> Street	1 <sup>st</sup> Floor-Next to Elevator	Not At Location
Bonnie House	2215 10 <sup>th</sup> Avenue	1 <sup>st</sup> Floor – Kitchen Area	Same Location
Butler-Hancock	1600 23 <sup>rd</sup> Street	2 <sup>nd</sup> Floor- Across from Room 270A	Same Location
Bulter-Hancock	1600 23 <sup>rd</sup> Street	1 <sup>st</sup> Floor – Outside Athletic Training	Same Location
Butler-Hancock Gymnasium	1600 23 <sup>rd</sup> Street	NorthWest Corner of Gymnasium	Same Location
Butler-Hancock Pool	1600 23 <sup>rd</sup> Street	Pool Area – West Wall	Not At Location
Butler-Hancock Training Room	1600 23 <sup>rd</sup> Street	Athletic Training Room	Same Location
Butler-Hancock Fieldhouse	1600 23 <sup>rd</sup> Street	Outside – North Wall Facing Fields	Not At Location
Campus Recreation Center	1300 23 <sup>rd</sup> Street	1 <sup>st</sup> Floor – Next to Elevator	Same Location
Campus Commons	1051 22 <sup>nd</sup> Street	1 <sup>st</sup> Floor – Next to Ticket Office	Same Location
Candelaria Hall	2098 14 <sup>th</sup> Avenue	Lower Level – Southwest Entrance	Same Location
Carter Hall - Administration	1700 9 <sup>th</sup> Avenue	1 <sup>st</sup> Floor – Next to Elevator	Same Location
Cassidy Hall	1901 10 <sup>th</sup> Avenue	1 <sup>st</sup> Floor – Next to Elevator	Same Location
Centerra - Loveland	2915 Rocky Mountain Ave	1 <sup>st</sup> Floor – Main Entry Area	Not At Location
Crabbe Hall	1900 8 <sup>th</sup> Avenue	1 <sup>st</sup> Floor – Southwest Corner	Same Location
Davie House	928 20 <sup>th</sup> Street	1 <sup>st</sup> Floor – North Entrance	Same Location
Empowerment Center	1505 23 <sup>rd</sup> Street	Training room east wall	Same Location
Frasier Hall	1710 9 <sup>th</sup> Avenue	1 <sup>st</sup> Floor – Next to Room 118	Same Location
Frasier Hall	1710 9 <sup>th</sup> Avenue	1 <sup>st</sup> Floor – Outside Room 171	Same Location
Gray Hall	1813 8 <sup>th</sup> Avenue	1 <sup>st</sup> Floor Lobby	Same Location
Guggenheim Hall	1819 8 <sup>th</sup> Avenue	1 <sup>st</sup> Floor – Outside Room 103	Same Location
Gunter Hall	1828 10 <sup>th</sup> Avenue	Ground Floor – Southeast Corner	Same Location
Hansen-Willis Hall	1929 10 <sup>th</sup> Avenue	1 <sup>st</sup> Floor – Across from the front desk	Same Location
Harrison Hall	1400 23 <sup>rd</sup> Street	1 <sup>st</sup> Floor – Lobby drinking fountain	Same Location
Holmes Dining Hall	1225 23 <sup>rd</sup> Street Road	Main Entry – Next to the check-in counter Room 110 – Next to the Coaches Office	Same Location Same Location
Jackson Field	411 20 <sup>th</sup> Street	Office	Not At Location
Jackson Field	411 20 <sup>th</sup> Street	South Entrance – Baseball Lockers	Not At Location
Judy Farr	1620 Reservoir Road	1 <sup>st</sup> Floor – Next to Restrooms	Same Location
Kepner Hall	2237 10 <sup>th</sup> Avenue	2 <sup>nd</sup> Floor Across from Elevator	Same Location
Kohl House	924 20 <sup>th</sup> Street	1 <sup>st</sup> Floor – Northwest Room	Same Location
Lawrenson Hall	2300 12 <sup>th</sup> Avenue Ct.	Entry Way East Wall	Same Location
McKee Hall	1200 21 <sup>st</sup> Street	1 <sup>st</sup> Floor – Northeast Stairwell 1 <sup>st</sup> Floor – Next to the Administration Office	Same Location Same Location
Michener Library	1400 – 22 <sup>nd</sup> Street	Office	Same Location
Michener Library – Lower Level	1400 22 <sup>nd</sup> Street	Lower Level - North Center Hallway	Same Location
North Hall	2253 11 <sup>th</sup> Avenue	1 <sup>st</sup> Floor Across from elevators	Same Location
Nottingham Field	2100 17 <sup>th</sup> Avenue	1 <sup>st</sup> Floor – West Stadium Entrance	Same Location
Nottingham Field	2100 17 <sup>th</sup> Ave	Outside East Building	Not At Location
Parsons Hall	411 20 <sup>th</sup> Street	1 <sup>st</sup> Floor – Main Hallway	Same Location

Patton House	1410 20 <sup>th</sup> Street	1 <sup>st</sup> Floor – Main Hallway	Same Location
Police Department	Patrol Units	(Units 21 - 22 - 23 - 24)	
Ross Hall	1100 22 <sup>nd</sup> Street	1 <sup>st</sup> Floor S. Wing outside Rm. 1230A	Same Location
Roudebusch Cottage	1815 8 <sup>th</sup> Avenue	1 <sup>st</sup> Floor – South Entrance	Same Location
Scott-Wilcoxon Hall	1915 10 <sup>th</sup> Avenue	1 <sup>st</sup> Floor – Main Entrance	Same Location
Skinner Music Library	1636 10 <sup>th</sup> Avenue	1 <sup>st</sup> Floor – Main Entrance	Same Location
South Hall	2323 11 <sup>th</sup> Avenue	Lobby – South Entranceway	Same Location
Tobey-Kendal Dining Hall	1901 9 <sup>th</sup> Avenue	2 <sup>nd</sup> Floor – Next to the check-in counter	Same Location
Turner Hall	2310 13 <sup>th</sup> Avenue	1 <sup>st</sup> Floor front entry near store	Same Location
University Center	2101 10 <sup>th</sup> Avenue	2 <sup>nd</sup> Floor – Main Entry	Same Location
Wiebking Hall	900 20 <sup>th</sup> Street	1 <sup>st</sup> Floor – Main Entrance fire alarm	Same Location
Wilson Hall	1927 9 <sup>th</sup> Avenue	1 <sup>st</sup> Floor – Main entrance east wall	Same Location
Young House	1855 10 <sup>th</sup> Avenue	1 <sup>st</sup> Floor – Kitchen Area	Not At Location





**UNC**

# AED/Bleed Kit Inspection Form

Inspected By:	Location of Inspection (Building):
Date of Inspection	AED Serial Number:

Use the following maintenance checklist when you check your unit.

### Check the following Pass or Fail

Check the following	PASS	FAIL	Comments
Is the green check showing that the unit is ready to use?	<input type="checkbox"/>	<input type="checkbox"/>	
Is the unit clean, undamaged, and free of excessive wear?	<input type="checkbox"/>	<input type="checkbox"/>	
Are there any cracks or loose parts in the housing?	<input type="checkbox"/>	<input type="checkbox"/>	
Verify that electrodes are within their expiration date.	<input type="checkbox"/>	<input type="checkbox"/>	
Verify electrodes are connected to the unit and sealed in their package. Replace if expired.	<input type="checkbox"/>	<input type="checkbox"/>	Exp. Date:
Are all cables free of cracks, cuts, and exposed or broken wires?	<input type="checkbox"/>	<input type="checkbox"/>	
Turn the unit on and off and verify the green check indicates ready for use.	<input type="checkbox"/>	<input type="checkbox"/>	
Batteries are within the expiration date. Replace if expired.	<input type="checkbox"/>	<input type="checkbox"/>	Exp. Date:
Check for adequate supplies (mask, gloves, extra batteries)	<input type="checkbox"/>	<input type="checkbox"/>	
The alarm on the AED Box operates correctly.	<input type="checkbox"/>	<input type="checkbox"/>	
If the Bleeding Control Kit is present at the location – the Seal is not broken or missing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> - N/A (Not Installed)
Are there two (2) doses of nasal Narcan?	<input type="checkbox"/>	<input type="checkbox"/>	Exp. Date:
Are both doses of Narcan undamaged and unopened?	<input type="checkbox"/>	<input type="checkbox"/>	
Are two (2) EpiPens present and undamaged?	<input type="checkbox"/>	<input type="checkbox"/>	Exp. Date: <input type="checkbox"/> - N/A (Not Installed)

### Cleaning the Unit

- After each use, clean and disinfect the unit with a soft, damp cloth using 90% isopropyl alcohol, soap, and water, or chlorine bleach and water mixture (30 ml/liter water).
- Do not immerse any part of the unit in water.
- Do not use ketones (MEK, acetone, etc.) to clean the unit.
- Avoid using abrasives (e.g., paper towels) on the display window or IrDa port.
- Do not sterilize the device.

### SEND COMPLETED FORM TO ENVIRONMENTAL HEALTH & SAFETY

ENVIRONMENTAL HEALTH & SAFETY USE ONLY		
Work Order Number	Schedule Date	Completion Date
Action Required:		

## Appendix B

### Guidelines for Using AED

AEDs are only useful for cardiac arrest (no pulse and no breathing). AEDs are not useful for other medical or traumatic incidents. Do not use an AED if the patient is conscious, breathing, or responsive. When possible, only adequately trained individuals should use the AED. The following steps are for the Zoll AED Plus and Philips AED devices that are used on campus.

Steps to follow when using a Zoll AED Plus device:

1. Call 911 or if someone else is present, ask them to call for help.
2. Press the On/Off button on the bottom right of the device to turn the AED Plus on.
3. Open the lid on the AED and start following the visual and voice prompts.
4. Check the responsiveness of the victim by shaking them gently and asking, "Are you okay?"
5. Press the CPR-D-padz firmly on the victim.
6. Do not touch the patient while the AED is performing the rhythm analysis.
7. If prompted, press the flashing shock button in the middle of the device. (Note: automatic version does not require pressing the shock button)
8. If the victim is unresponsive, perform CPR as instructed by the AED until medical help arrives.
9. Once you've started to perform CPR, the AED Plus helps you to maintain the corrected depth and rate. The AED Plus will instruct you to stop CPR after 2 minutes to perform a heart rhythm analysis.
10. Maintain an open airway using the lid as a passive airway support system for the "head-tilt chin-lift" maneuver by placing it between the victim's shoulder blades.

Steps to follow when using a Philips AED device:

1. Call 911 or if someone else is present, ask them to call for help.
2. Quickly get the AED and bring it to the victim's side. If there is any delay in getting the defibrillator, check the patient and perform cardiopulmonary resuscitation (CPR) if needed until the AED is available.
3. PULL up the handle on the SMART Pad cartridge
4. PLACE the pads on the patient's bare skin
5. PRESS the flashing shock button if instructed.

## Appendix C

### Guidelines for Using Bleeding Control Kit

Before you offer any help, you must ensure your safety. If you become injured, you will not be able to help the victim. If the scene is safe, provide care to the injured person. If at any time your safety is threatened, attempt to remove yourself (and the victim if possible) from danger into a safe location. Protect yourself from blood-borne infections by wearing gloves if available. The following steps are provided by North American Rescue which is the provider of the stop bleeding kits on campus.

Steps to follow in case of severe bleeding:

#### Apply Gauze and Compress

1. Identify & cover the wound
2. Apply direct pressure until bleeding is controlled
3. Wrap wound with Emergency Trauma Dressing (ETD)

#### Responder Emergency Trauma Dressing (ETD)

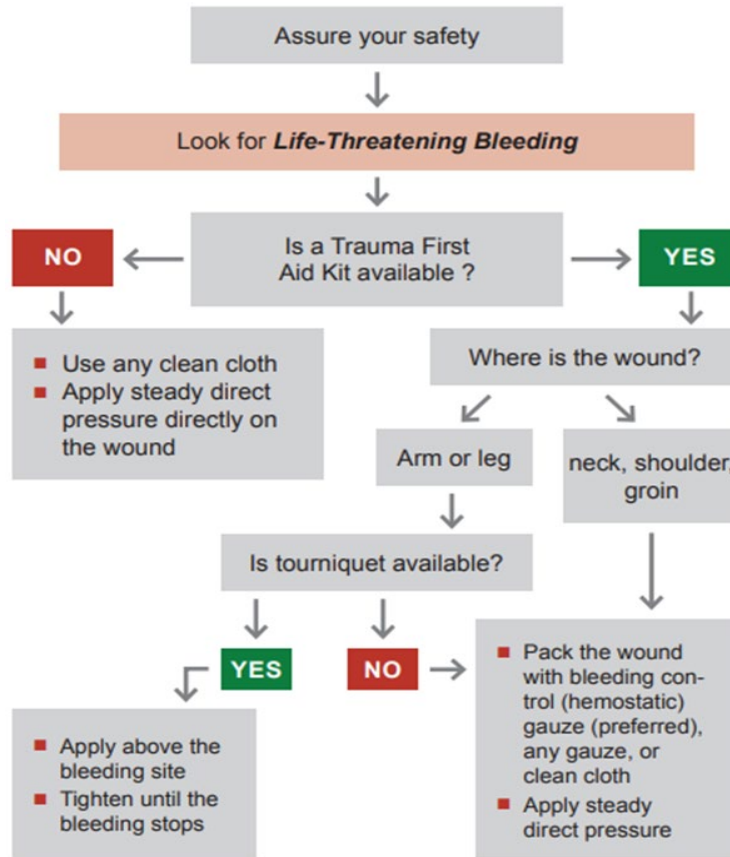
1. Place pad over the wound.
2. Wrap around the limb, covering the pad.
3. Pull ETD firmly, and continue to wrap, covering the wound completely and secure with Velcro.

#### Open Chest Wound

1. Wipe the wound with gauze.
2. Peel the seal from the backing using a red tab.
3. Center over the wound.
4. Firmly press onto the skin.

#### Major Bleeding on Arm or Leg

1. Apply C-A-T Tourniquet.
2. Insert the injured limb through the loop and position the C-A-T 2-3" above the bleeding site directly on the skin.
3. Pull the band tightly and fasten it back on itself around the limb but not over the rod clips.
4. Twist the rod until the bleeding has stopped.
5. Secure the rod inside a Clamp to lock it in place and check for bleeding and distal pulse.
6. Route the band between the clips and over the rod. Secure rod and band with TIMEstrap.
7. Record the time of application.



Watch for signs of shock: Shock is a critical condition brought on by the sudden drop in blood flow through the body.

Symptoms of shock may include:

- Cool, clammy, pale, or ashen skin
- Bluish tinge to lips or fingernails
- Rapid pulse and breathing
- Nausea or vomiting (turn the victim on side if vomiting)
- Enlarged pupils
- Weakness, fatigue, dizziness, fainting
- Changes in mental status or behavior
- If you suspect a person is in shock, call 911 or UNC PD. Then immediately take the following steps:
  - Lay the person down and elevate the legs and feet slightly, unless you think this may cause pain or further injury.
  - Keep the person still and don't move them unless necessary.
  - Begin CPR if the person shows no signs of life, such as not breathing, coughing, or moving.
  - Loosen tight clothing and, if needed, cover the person with a blanket to prevent chilling.
  - Don't let the person eat or drink anything.

## **Appendix D**

### **Bleed Control Kit Contents**

Below is a list of what is in each bleed control kit for purposes of restocking kits after use.

- 5 Individual Bleeding Control Kits
- 1 Responder QuikLitter

The contents in the Individual Bleeding Control Kits are:

- 1 C-A-T Tourniquet
- 1 Responder ETD Trauma Dressing
- 2 Responder Compressed Gauze
- 2 Pair Responder Nitrile Gloves, Large
- 1 Responder Trauma Shears, Large
- 1 NAR Survival Blanket
- 1 Permanent Marker
- 1 Just in Time Instruction Card

## Appendix E

### Guidelines for Using Naloxone

Naloxone quickly reverses an overdose by blocking the effects of opioids. It can restore normal breathing within 2 to 3 minutes in a person whose breath is shallow or even stopped as a result of opioid overdose. If you give someone naloxone, stay with them until emergency help arrives. It is important to note that if a drug overdose is not present and symptoms are misidentified as an overdose the use of naloxone will not harm the person in trouble.

Steps to follow in case of an overdose.

1. Identify Overdose
  - a. Breathing is very slow, irregular, or has stopped
  - b. Pinpoint pupils
  - c. Ashy-colored skin, or blue lips
2. Check for responsiveness
  - a. Will not wake up or respond to your voice or touch
  - b. Shake shoulders
3. Lay the person on their back to receive a dose of Narcan nasal spray
4. Remove Narcan nasal spray from the package
5. Hold Narcan nasal spray with your thumb on the bottom of the red plunger and your first and middle fingers on either side of the nose
6. Tilt the person's head back and provide support under the neck with your hand. Gently insert the tip of the nozzle into one nostril until your fingers on either side of the nozzle are against the bottom of the person's nose.
7. Press the red plunger firmly to give the dose of Narcan nasal spray
  - a. Active breathing is not needed for Narcan to take effect the substance absorbs through the membrane in the nose.
8. Remove Narcan nasal spray from the nostril after giving the dose.

After Naloxone is used:

1. Call 911
2. Give emergency medical help
  - a. Move the person to their side (recovery position)
  - b. Watch person closely
  - c. If the person does not respond within 2 to 3 minutes by waking up, to voice, touch, or breathing normally after the first dose a second dose may be required.
  - d. Repeat steps 3 through 8 above.
3. Stay on scene until police or medical personnel respond to your location.

## **Appendix F**

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

#### **Epinephrine Auto-Injector Introduction**

Colorado law requires institutions of higher education to obtain Epinephrine auto-injectors for the purpose of administering to persons perceived to be experiencing anaphylaxis. Colorado law permits any person to retrieve and use an epinephrine injector and provides immunity from criminal liability and from suit in any civil action for individuals who act in good faith to use an epinephrine auto-injector to administer epinephrine to another person believed to be suffering from anaphylaxis.

Epinephrine is a medication used for the emergency treatment of anaphylaxis for stings or bites, foods, medications, latex, or other allergens, and for basic life support treatment for severe asthma. Anaphylaxis can affect several areas of the body, including breathing and blood circulation, which could be life-threatening. Epinephrine mimics the responses of the sympathetic nervous system. It quickly constricts blood vessels to improve blood pressure, reduces the leakage from the blood vessels, relaxes smooth muscle to improve breathing, stimulates the heart, and works to reverse swelling and hives. Epinephrine takes effect within seconds, but the duration of its effectiveness is short (about 10-20 minutes). Signs and symptoms may return as the medication wears off.

The University of Northern Colorado maintains a supply of Epi-Pen Auto-Injectors. The Epi-Pen Auto-Injector is a disposable delivery system for emergency treatment of severe allergic reactions, which has a spring-activated needle that is designed to deliver a single precise dose (0.3 mg of 1:1000 solution) of epinephrine when activated. It may be necessary for very severe reactions to administer a second dose after five minutes if the initial response is inadequate. Supplied kits include two injectors.

#### **Emergency Care for Anaphylaxis and/or Severe Asthma with Epi-Pen – Administration of Epinephrine**

UNC staff shall:

1. Call UNC Police Department at 970-351-2245 or 911
2. Check the Epi-Pen expiration date, check for discoloration, and that it does not contain particulates or sediments.
3. Prep the skin site with an alcohol wipe when possible (Auto-injectors can be administered through denim clothing when necessary).
4. Remove the safety cap from the auto-injector. Place the tip of the auto-injector against the lateral aspect of the patient's thigh midway between the waist and knee.

5. Push the injector firmly against the thigh until the spring-loaded needle is deployed and the medication is injected (at least 10 seconds)
6. Dispose of the auto-injector in a biohazard container designed for sharp objects. Be careful not to prick yourself since the needle will now be protruding from the end of the injector.
7. Report use, dosing, and time of administration to UNC Student Health Services ([debra.miller@unco.edu](mailto:debra.miller@unco.edu)). UNC is required to report Epinephrine use to the State of Colorado

### **Possible Side Effects of Epinephrine Use**

The patient may experience side effects following the administration of epinephrine, including increased heart rate, pale skin, dizziness, chest pain, headache, nausea, vomiting, excitability, and anxiousness.

### **Reassessment Following the administration of epinephrine**

Reassessment is required and should include:

1. Continued evaluation of airway, breathing, blood pressure, and circulatory status.
2. Signs of decreasing mental status
3. Increased difficulty breathing which indicates the allergic reaction is worsening.
  - a. If the condition is worsening, consider the following interventions:
    - i. Injection of a second dose of epinephrine if available
    - ii. Emergency care for shock; lay the patient down, elevate legs 12" above the head, don't lift the head, keep warm, loosen tight clothing, and don't give food or drink.
    - iii. Initiate CPR and apply AED if the patient has no pulse.

If the patient's condition improves, continue to reassess. Any patient requiring epinephrine administration should be transported to the nearest medical facility for follow-up evaluation as soon as possible.

### **Maintenance and Storage**

1. The expiration date must be checked every month, and replace the units once they have expired.
2. Keep the epi-pen at room temperature. Liquid medicine in the injector should be clear. If it is discolored or has floating specks, replace the pen.
3. Injector disposal – the injector should not be thrown away in the normal trash, instead take the used or expired injector (inside the case) to UNC Student Health Center in Cassidy Hall for proper disposal




## Reporting

The use of epinephrine auto-injectors must be reported to the Colorado Department of Health and Environment (CDPHE) at:

<https://fs9.formsite.com/ColoradoIMMprogram/form160/index.html>

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**Report of Anaphylaxis with Use of Epinephrine Injector**

**Name of business: \***

**Type of business \***

Agriculture       Colleges and Camps       Domestic Services

Education and Learning       Entertainment       Hair and Beauty

Manufacturing       Medical       Pets

Retail shopping       Restaurant       Sports and Recreation

Other

**Information About Person Reporting**

**Last Name \***

**First name \***