



UNIVERSITY OF
NORTHERN COLORADO

Environmental Health and Safety

**Automated External Defibrillator (AED)
and Bleeding Control Program**

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**Automated External Defibrillator (AED)
and Bleeding Control Program**

I. Introduction

This policy outlines the University of Northern Colorado's Automated External Defibrillator (AED) and Bleeding Control 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 percent 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 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 victims who are unconscious, 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. AED's 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.

III. Regulations

CRS 13-21-108 (Good Samaritan Law) states that a person's 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.

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 and Bleeding Control program. EHS shall be responsible for maintaining devices to meet regulatory compliance, the standards of the manufacturer, programmatic standard of the American Heart Association or the American Red Cross, and the UNC program. EHS shall:

- Coordinate AED and Bleed Control Kit equipment location with Building Coordinators to promote easy access
- Ensure that Building Coordinators are conducting inspections in a timely manner 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, and ensure proper operation of AED and Bleed Control units
- Maintain AED and Bleed Control Kit inspection records
- Purchase and replace batteries, pads, and other supplies as needed
- Maintain and provide an inventory of AED and Bleed Control Kit 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 provide assistance with AED's and Bleeding Control kits 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 provide assistance with:

- Serve as contact for the AED and Bleed Control Kit program coordinator
- Include the AED and Bleeding Control kits in the building emergency response plan
- Provide monthly inspections of the AED unit and Bleeding Control kits (see Inspection Form, Appendix A)

- Notify the AED program coordinator within 24 hours of an incident.
- Have an opportunity to participate in voluntary training programs.

V. Maintenance & Inspections

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

Inspections shall be performed on all AED units and Bleeding Control Kits. 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 Athletic Training Department will conduct inspections on their AED units that are maintained by the Athletic trainers during athletic events.

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

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 who 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, as needed.

VII. Training

EHS can assist with providing training for employees that may be operating AED units. This would include but 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 and stopthebleed.org. Each department that requires AED training shall maintain training documentation for each employee for a minimum of three years.

VIII. Locations of AED's and Bleeding Control Kits

AED units are in the following locations (bleeding control kits are placed alongside AED units):

<u>UNC Building</u>	<u>Building Address</u>	<u>Location of AED Unit</u>	<u>Bleed Kit</u>
Arlington Park Apartments	2315 9 th Avenue	Building 1 across from main office	
Arts Annex	1843 8 th Avenue	1 st Floor North Entrance	Same Location
Ben Nighthorse Campbell Center	913 9 th Street	Entryway to Room 1300	
Bonnie House	2215 10 th Avenue	1 st Floor – Kitchen Area	
Butler-Hancock	1600 23 rd Street	2 nd Floor – Across from Room 270A	
Bulter-Hancock	1600 23 rd Street	1 st Floor – Outside Athletic Training	

UNC Building	Building Address	Location of AED Unit	Bleed Kit
Butler-Hancock Gymnasium	1600 23 rd Street	Southeast Corner of Gymnasium	Same Location
Butler-Hancock Training Room	1600 23 rd Street	Athletic Training Room	
Butler-Hancock Fieldhouse	1600 23 rd Street	Inside Eastside door 109	
Campus Recreation Center	1300 23 rd Street	1 st Floor – Next to Elevator	Same Location
Campus Commons	1051 22 nd Street	1 st Floor – Next to Ticket Office	Same Location
Candelaria Hall	2098 14 th Avenue	Lower Level – Southwest Entrance	
Carter Hall - Administration	1700 9 th Avenue	1 st Floor – Next to Elevator	
Cassidy Hall – Student Health Center	1901 10 th Avenue 2915 Rocky Mountain Ave	1 st Floor – Next to Elevator	
Centerra - Loveland		1 st Floor – Main Entry Area	
Crabbe Hall	1900 8 th Avenue	1 st Floor – Southwest Corner	
Davis House	928 20 th Street	1 st Floor – North Entrance	
Empowerment Center	1505 23 rd Street	Training room east wall	Same Location
Frasier Hall	1710 9 th Avenue	1 st Floor – Next to Room 118	Same Location
Gray Hall	1813 8 th Avenue	1 st Floor Lobby	
Guggenheim Hall	1819 8 th Avenue	1 st Floor – Outside Room 103	
Gunter Hall	1828 10 th Avenue	Ground Floor – Southeast Corner	
Hansen-Willis Hall	1929 10 th Avenue	1 st Floor – Across from front desk	
Harrison Hall	1400 23 rd Street	1 st Floor – Lobby drinking fountain	
Holmes Dining Hall	1225 23 rd Street Road	Main Entry – Next to check-in counter	
Jackson Field	411 20 th Street	Room 110 – Next to Coaches office	Same Location
Jackson Field	411 20 th Street	South Entrance – Baseball lockers	
Judy Farr	1620 Reservoir Road	1 st Floor – Next to Restrooms	
Kepner Hall	2237 10 th Avenue	2 nd Floor Across from Elevator	
Kohl House	924 20 th Street	1 st Floor – Northwest Room	
Lawrenson Hall	2300 12 th Avenue Ct.	Entry Way East Wall	
McKee Hall	1200 21 st Street	1 ST Floor – Northeast Stairwell 1 st Floor – Next to Administration Office	Same Location
Michener Library	1400 – 22 nd Street		
Michener Library – Lower Level	1400 22 nd Street	Lower Level - North Center Hallway	
North Hall	2253 11 th Avenue	1 st Floor Across from elevators	
Nottingham Field	2100 17 th Avenue	1 st Floor – West Stadium Entrance	
Parsons Hall	411 20 th Street	1 st Floor – Main Hallway	Same Location
Patton House	1410 20 th Street	1 st Floor – Main Hallway	
Police Department	Patrol Units	(Units 21 - 22 - 23 - 24)	
Ross Hall	1100 22 nd Street	1 st Floor S. Wing outside Rm. 1230A	Same Location
Roudebush Cottage	1815 8 th Avenue	1 st Floor – South Entrance	
Scott-Wilcoxon Hall	1915 10 th Avenue	1 st Floor – Main Entrance	
Skinner Music Library	1636 10 th Avenue	1 st Floor – Main Entrance	
South Hall	2323 11 th Avenue	Lobby – South Entranceway	
Tobey-Kendal Dining Hall	1901 9 th Avenue	2 nd Floor – Next to check-in counter	Same Location
Turner Hall	2310 13 th Avenue	1 st Floor front entry near store	
University Center	2101 10 th Avenue	2 nd Floor – Main Entry	Same Location
Wiebking Hall	900 20 th Street	1 st Floor – Main Entrance fire alarm	
Wilson Hall	1927 9 th Avenue	1 st Floor – Main entrance east wall	
Young House	1855 10 th Avenue	1 st Floor – Kitchen Area	



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 within 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"/>	
Alarm on AED Box operates correctly	<input type="checkbox"/>	<input type="checkbox"/>	
If Bleeding Control Kit is present at location – Make sure seal is not broken or missing	<input type="checkbox"/>	<input type="checkbox"/>	

Cleaning the Unit

- After each use, clean and disinfect the unit with a soft, damp cloth using 90% isopropyl alcohol, or 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 towel) 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.

Automated External Defibrillator (AED) Procedures:

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 team members 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 Onsite 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 need until the onsite is available.
3. PULL up the handle on the SMART Pads Cartridge
4. PLACE the pads on the patient's bare skin
5. PRESS the flashing shock button if instructed.

Appendix C.

Stop Bleeding After an Injury:

Before you offer any help, you must ensure your own 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 the North American Rescue which is the provider for 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 ETD

Responder Emergency Trauma Dressing (ETD)

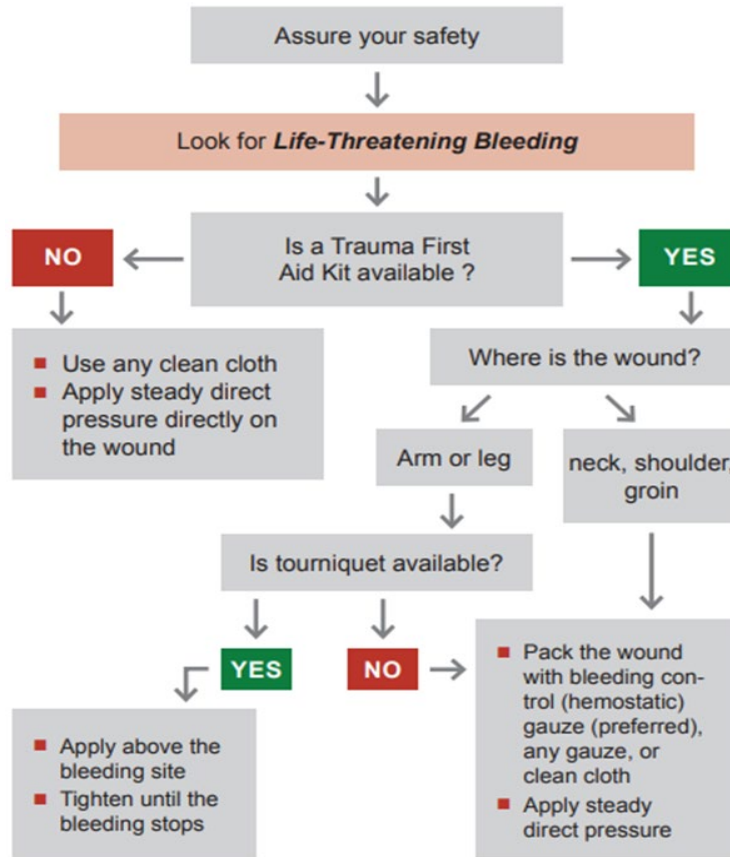
1. Place Pad over the Wound.
2. Wrap around the Limb, covering the pad.
3. Pull ETD firmly, and continue to wrap, covering the wound completely and secure with Velcro.

Open Chest Wound

1. Wipe Wound with Gauze.
2. Peel Seal from Backing using Red Tab.
3. Center over wound.
4. Firmly press onto 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 band tightly and fasten it back on itself all the way around the limb but not over the rod clips.
4. Twist the rod until the bleeding has stopped.
5. Secure the rod inside a CLimp 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 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 him or her 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.

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