 <p>Winnipeg Regional Health Authority Office régional de la santé de Winnipeg Caring for Health À l'écoute de notre santé</p> <p><b>FAMILY MEDICINE- PRIMARY CARE PRACTICE GUIDELINE</b></p>	<p><b>Practice Guideline:</b> Use of Automated External Defibrillator for Sudden Cardiac Arrest (Adults)</p>	<p><b>Guideline Number:</b> PCPG#11</p>
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## 1. **INTENT**


- To provide consistent, optimal, evidence informed response by primary care staff to adult patients in cardiac arrest
- To supplement existing Emergency and Cardiopulmonary Resuscitation (CPR) training resources available including:
  - [Primary Care Operating Guideline #8 - Emergency Cart: Equipment, Supplies, and Medication](#)
  - [Primary Care Operating Guideline #13 - Cardiopulmonary Resuscitation Training](#)
  - [WRHA Regional Policy #110.050.040 - Cardiopulmonary Resuscitation Training](#)
  - [Other Primary Care Emergency Practice Guidelines](#)

### **Guiding Principles:**

- The time between collapse and initiation of both CPR and defibrillation is critical to the patient's survival
- Defibrillation is the only way to re-establish the normal beating action of the heart that is in ventricular fibrillation
- Reducing the time to CPR and to defibrillation increases the chances of survival
- Combined with CPR, the use of an Automated External Defibrillator (AED) may increase the likelihood of saving a person's life by 75% or more over CPR alone

## 2. **DEFINITIONS**

- **Automated External Defibrillator (AED):** A portable electronic device that is connected to an individual with electrode pads to automatically analyze a patient's heartbeat and guide the user to correctly deliver an electric shock. It also provides instruction on how to proceed following defibrillation.
- **Basic Life Support (BLS):** Also known as Cardiopulmonary Resuscitation (CPR); consists of a number of potentially life-saving techniques focused on the CABs (Chest Compressions, Airway, Breathing) of emergency care
- **Cardiopulmonary Resuscitation (CPR):** An emergency procedure involving chest compressions and artificial respiration
- **Code Blue Training:** Online WRHA training modules (two are applicable and specific to Community Health Services) designed to teach WRHA staff Basic Life Support (BLS) tasks including the use of Automated External Defibrillators (AED). The online training modules are role-based, self paced/self study courses. [Code Blue Modules](#) are posted on WRHA INSITE.

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- **Sudden Cardiac Arrest:** Occurs when the heart unexpectedly stops beating effectively which means that the heart no longer pumps blood to the brain. Without the oxygen and nutrients supplied by the blood, brain cells begin to die within minutes, and death soon follows. For a few minutes before the heart stops completely, it usually goes into a rhythm called ventricular fibrillation, where it is often possible to shock the heart back into a normal rhythm with a device called an Automated External Defibrillator (AED). Classic signs of pre-cardiac arrest include severe shortness of breath, chest pain, and excessive sweating.

### 3. **GUIDELINES**

3.1. AEDs shall be available for use in all WRHA Direct Operations Primary Care Clinics, Family Medicine Teaching Clinics, and Quick Care Clinics to allow patient defibrillation within three minutes of identified arrest, or if a patient is discovered following an un-witnessed arrest

3.2. AEDs are designed to be used by **anyone** who has access to them. All staff shall familiarize themselves with BLS and AED use by:


- Completing the applicable Community Health Services online Code Blue Modules as outlined in [Primary Care Operating Guideline #13 - Cardiopulmonary Resuscitation Training](#)
- Reviewing and complying with [WRHA Regional Policy #110.050.040 - Cardiopulmonary Resuscitation Training](#)

3.3 AEDs provide automated step-by-step instructions that guide users to safely perform defibrillation on a collapsed, unresponsive patient. The use of an AED is reserved for patients who have all of the following:

- No response,
- No breathing,
- No pulse

3.4 Operation of an AED:

- When someone collapses, first assess the safety of the location
- Assess the patient's responsiveness by tapping on the collarbone or shouting
- If unresponsive, call 911 and retrieve the AED and emergency cart
- Assess the patient's breathing
- If the patient is unresponsive, not breathing, and no pulse is detected, begin CPR
- Turn on the AED
- Place electrode pads correctly on the patient's chest
- Ensure that no one is touching the patient and allow the AED to analyze the heart rhythm
- Stay clear of the patient. If required, the AED will advise you to deliver a shock.
- The AED will then advise you to continue CPR, and when to clear the patient for analysis a second time

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- Follow the AED prompts to deliver another shock or to continue with CPR as appropriate
- Use emergency documentation to note emergency treatment and progress, as detailed in the [Generalized Emergency Protocol in Primary Care Setting](#)


#### **4. EQUIPMENT/SUPPLIES REQUIRED**

##### **Automated External Defibrillator (AED):**

- Purchased through WRHA Logistics; will ensure a standardized unit is purchased for all locations
- While the current recommended AED unit is the Zoll AED Plus Defibrillator (APPENDIX A), it is recognized that other AED units may be in operation within WRHA clinics
- AED is to be stocked as part of the emergency cart
- AED must be checked according to manufacturer's instructions to ensure that it is functional and ready for use. This check must be documented as part of the emergency cart checklist.
- AED must be cleaned and maintained according to manufacturer's recommendations, consistent with equipment cleaning policies and routine practices including [Routine Practices for Reducing the Risk of Infection Transmission \(WRHA Regional Policy #90.00.060\)](#)
- As part of [Primary Care Operating Guideline #6 - Emergency Response Training in Primary Care](#), AED practice should be included as a yearly mock emergency

#### **5. REFERENCES**

- Heart and Stroke Foundation of Canada, Automated External Defibrillations: whose life will you need to save? [www.heartandstroke.ca](http://www.heartandstroke.ca)
- Heart and Stroke Foundation of Canada, CPR Guidelines 2010, <http://www.heartandstroke.com/site/c.ikIQLCMWJtE/b.6301495/k.940B/CPRguidelines.htm>
- WRHA Regional Policy 110.050.010 Code Blue Team Resuscitation in Acute Care, January 2013
- WRHA Regional Policy 110.050.040 Cardiopulmonary Resuscitation Training, February 2014
- WRHA Cardiopulmonary Resuscitation (CPR) Frequently Asked Questions (FAQ), revised June 14, 2007.
- Manitoba eHealth Code Blue guide, [http://hscxlxb0001.hsc.mb.ca/wrha\\_intranet/cpr/files/CodeBlueGuide.pdf](http://hscxlxb0001.hsc.mb.ca/wrha_intranet/cpr/files/CodeBlueGuide.pdf)
- WRHA Code Blue Learning Modules, [Code Blue Modules](#)
- Preparedness for CPR in Primary Care, Scandinavian Journal of Primary Care 22:2, 87-90
- Resuscitation by Primary Care Doctors, Resuscitation 70, 2 Aug 2006 229-237
- Feedback received from and in consultation with the Regional Primary Care Quality Team membership, July 2015

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**8. APPENDIX**

- APPENDIX A – Zoll AED Plus AED

**SCOPE:** Applicable to all WRHA Primary Care Direct Operated Clinics, Quick Care Clinics, Northern Connection Medical Centre and Family Medical Centre.

Kildonan Medical Centre is co-located within SOGH and therefore out of scope.