

# North Dakota Cardiac Ready Community Program



The North Dakota Cardiac Ready Community program is designed to promote survival from a cardiac event, such as sudden cardiac arrest outside of the hospital setting (OHCA). The goal is to have a community prepared to respond and assist if an individual has a cardiac event. The Cardiac Ready Community program promotes the American Heart Association Chain of Survival, which can improve the chances of survival and recovery for victims of heart attack, stroke, and other emergencies. Individuals need to be able to recognize a cardiac emergency, know how to dial 9-1-1 to access first responders immediately, begin cardiopulmonary resuscitation (CPR), and have public access to Automated External Defibrillators (AEDs).

### **Six Links in the Chain of Survival**

- Immediate recognition of cardiac arrest and activation of the emergency response system
- Early CPR with an emphasis on high quality chest compressions
- Rapid defibrillation
- Effective basic and advanced life support
- Integrated post-cardiac arrest care
- Recovery



To be designated as a North Dakota Cardiac Ready Community, a set of minimum criteria must be achieved. The requirements support the chain of survival, such as how to activate an emergency response, CPR instruction, public access to AEDs, hypertension screenings, and resuscitation protocols and transport plans for first responders and area hospitals. Communities that meet the established criteria can apply to become designated as a North Dakota Cardiac Ready Community. If a community does not meet the established criteria, it can take steps to work towards designation.

## **How to Become a Cardiac Ready Community**

**Analyze Your Community's Situation-** Every community is different, with unique challenges to forming a strong chain of survival. Review the common elements of being a Cardiac Ready Community and compare them to your community. Decide what needs to be changed or strengthened in your community to improve the chain of survival.

Some examples to consider include:

- Do major public gathering places or businesses in your community have AEDs available and staff trained in CPR?
- What is the response time of EMS in your community? Are there areas in which it is frequently prolonged?
- Does your community have a hospital? If not, where is the nearest hospital?
- What percentage of your population is trained in CPR?
- Does an organization in your community offer preventative screenings such as blood pressure screenings?
- What is the survival rate in your community from cardiac arrest?

**Build a Support Team-** Implementing a widespread change in the community requires support, which is impossible without many parties committing to the cause. Public support is an essential aspect of this program. Public support can be affected through media campaigns using social media, newspapers, and television stations. Events such as CPR training and survivor stories are often of interest to news stations and offer free publicity to spread your message. Your community should have a team responsible for leading and organizing what is needed to meet the designation criteria. Look to the following areas for representatives:

- City Commission
- EMS, Fire, and Police
- Nurses
- Hospital/Clinic
- Public Health
- Elected Officials
- Dispatch or Public Safety Answering Point (PSAP)

- CPR Instructors
- Chamber of Commerce
- Public High School Administration
- Major Employers in the Community
- Survivors

**Information Meeting-** Once you build a community support team, contact the North Dakota Cardiac/Stroke System Coordinator to arrange a meeting to discuss the criteria needed for your community to become a designated North Dakota Cardiac Ready Community. We realize that each community is different and has unique needs and challenges, so we would like the opportunity to sit down with your team to discuss your community's goals and what the specific criteria will be for your community. You can contact Christine Greff at [cgreff@nd.gov](mailto:cgreff@nd.gov) for more information.

**Implement & Track-**Once your community understands the criteria you need to fulfill, you can begin to make changes to become a Cardiac Ready Community. Your planning team must keep a record of what events you hosted, how many people participated, and other data. We ask that you collect this data to evaluate the effectiveness of your community's changes and use it to focus your community's efforts further. It will aid your community in seeing what is working and what is not.

**Designation-**Once you feel your community has satisfied the criteria established, request designation from the North Dakota Department of Health. A representative from the ND Department of Health will assess whether your community has met the set criteria. Your community will receive either a designation as a North Dakota Cardiac Ready Community or feedback on areas for improvement before designation will be granted. North Dakota Cardiac Ready Community Designation will be valid for three years, at which time your community will need to reapply for designation.

## **Community Leadership**

Hold group meetings with all the stakeholders in your community (EMS providers, health care providers, hospital personnel, law enforcement, city/county officials, fire department, churches, schools, public health officials, civic groups, etc.) The stakeholder group will select a lead organization to spearhead the Cardiac Ready Community effort. Ideally, the lead organization or group will have an individual who becomes the "face" of the program in that community. This person is not "in charge" but is the coordinator of all stakeholders who want to see their community become a Cardiac Ready Community. Other groups and entities must still play their part to see the program succeed.

The Cardiac Ready Community program's goal is that a single organization leads the community effort with support from the entire population. This organization will be responsible for data collection and reporting on the Cardiac Ready efforts.

### **Please address the following:**

1. Name and contact information for the person selected as the "leader" of the Cardiac Ready Community efforts (from the lead organization).
2. List of stakeholder groups overseeing the community efforts to become Cardiac Ready.
3. Describe the community-the population of your community and what areas it includes.
4. Stakeholder meeting schedule (required to meet a minimum of one time per year).

## Ongoing Community Awareness Campaign

Most people wait two hours or more to seek medical assistance after experiencing heart attack or stroke symptoms. Further, countless people travel to the emergency room by privately owned vehicle. Both issues are contributing factors to the high morbidity and mortality rate associated with heart attacks and strokes. Ideally, people experiencing symptoms, or those with someone experiencing symptoms, will dial 9-1-1 right away for care and transport to a hospital in an ambulance.

An ongoing community education campaign should not only include information on how a person can reduce their risk of having a heart attack, sudden cardiac arrest, or stroke, but just as importantly, what to do should it occur. Various methods of education should be utilized, such as printed education (flyers, brochures, "toilet talks," *etc.*), electronic education (social media pages, websites, marquees, *etc.*), or in-person education (education at schools, health fairs, lunch and learns, community events, *etc.*).

The program would also include developing and implementing a system to track and evaluate the effectiveness of various marketing tools and methods.

While prevention is the preferred method of reducing the loss of life from a cardiovascular emergency, history has shown if the focus is on prevention alone, you will have little impact on decreasing the incidence of a sudden cardiovascular emergency.

The Cardiac Ready Community program aims to improve community awareness of the signs and symptoms of a cardiovascular emergency (heart attack, stroke, or sudden cardiac arrest) and have citizens activate the 9-1-1 system instead of going to the hospital by a privately-owned vehicle.

May include but not be limited to education/outreach provided to the public during public events, outreach to schools or local businesses, ads in the local newspaper, or social media presence. Topic ideas include blood pressure-a know your numbers campaign, signs, and symptoms of a heart attack or stroke, activating the emergency response system and initiating CPR, healthy lifestyle choices, opportunities for the community to get active and reduce weight, stop smoking campaign, *etc.*

### **Please address the following:**

1. How have you increased awareness of cardiovascular emergency response in your community? What education has been provided, and by what method?
2. What education are you planning to provide for the next year, by what method, and how do you plan to reach a broad audience?

## Community Blood Pressure Control Program

The leading risk factor for cardiac and stroke events is high blood pressure (hypertension).

High blood pressure causes microscopic tears in your arteries. Uncontrolled high blood pressure can also cause problems by damaging and narrowing the blood vessels in your brain. Over time, this raises the risk of a blood vessel becoming blocked or bursting. Knowing your numbers through checking your blood pressure, changing your lifestyle with physical activity and healthy food choices, and control – working with your health provider, can impact the cardiac and stroke events within your community.

Link for resources: [Blood Pressure Fact Sheets](#) | [American Heart Association](#)

### **Please address the following:**

1. What has your community done to increase blood pressure screenings of community members?
2. Establish what standard blood pressure guidelines you follow during blood pressure screening events.
3. Create a blood pressure screening protocol that addresses screening procedures, post-assessment guidelines, counseling points, and referral processes.
4. What educational materials have been developed to provide to those screened? What educational materials have been developed to increase blood pressure and hypertension awareness among the community? How will you provide this blood pressure education?
5. What are the results of your blood pressure screening campaign? How does your community intend to continue your blood pressure screening campaign in the future? How do you plan on screening and educating more individuals in your community?

## **CPR & AED Training**

There are several different CPR courses available through the American Heart Association and the American Red Cross. All provide valuable information for the general public. However, recent research has shown that for the average layperson, Hands-Only CPR (no rescue breathing) for teens and adults is just as effective and is more likely to be implemented in a cardiac emergency. In addition, having law enforcement officers and firefighters trained in high-quality CPR and being equipped with an AED decreases the time from initial collapse to having a shock delivered to the heart.

The Cardiac Ready Community Program promotes the cardiac chain of survival, which includes early recognition and initiation of CPR, and does not differentiate between courses in which community members participate. Whichever course(s) is implemented should also include a section/module on using an AED to meet the other step in the chain of survival of having an electrical shock delivered to the heart within 3-5 minutes.

### **Please address the following:**

1. Describe the CPR/AED class availability in your area. What types of classes are being offered, how often, and what is the typical attendance?
2. Describe the efforts being made in the community to increase CPR/AED training and hands-only CPR training in your community.
3. What is the intent for continuing community training in CPR and AED use?

## **Public Access AED Locations**

The American Heart Association reports that sudden cardiac arrest victims who receive immediate CPR and an AED shock within three to five minutes have a much higher chance of surviving. As a part of the Cardiac Ready Community Program, public access AEDs should be deployed in target areas throughout the community. Consideration should be given to deploying AEDs so that a shock can be delivered within three to five minutes of the event occurring, and members of the community are encouraged to use an AED when the need arises.

The Cardiac Ready Community program aims to have communities assess the locations of the AEDs currently available, report those locations to 911 dispatching and the local ambulance service and develop a plan to acquire and distribute additional AEDs to cover their community adequately.

### **Please address the following:**

1. Provide a map of AED locations in your community, if available.
2. Enter AEDs in your community into the free PulsePoint AED application.
3. Please describe your system of monitoring AED pad and battery expiration dates.
4. How many AEDs are located in public/school buildings? How many AEDs are located in businesses?
5. How many additional AEDs does your community require to satisfy the need?
6. What is your plan to meet unmet needs and add additional AEDs to your community?

## EMS Dispatching Program

Every community is unique in how Emergency Services are delivered. 911 dispatching is a crucial element in this process. Communities that have enhanced 911 improve response by knowing where the call originated even without the caller telling them. Having dispatchers trained in how to help a caller assess a medical emergency and giving directions on what to do over the phone dramatically improves the chance of survival. Recent studies have shown that simply having dispatchers coach a caller through the steps of hands-only CPR vastly improves the chance of survival, while risks from doing CPR on someone who doesn't need it are relatively low. Dispatch-assisted CPR and Emergency Medical dispatching (EMD) are critical components in the chain of survival.

Additionally, by using enhanced 911, a dispatcher can frequently direct bystanders to the nearest location of an AED. Without enhanced 911, if communities know the location of all AEDs and share that information with dispatch, the ability to get the AED to the patient is greatly improved.

There is strong evidence that dispatching law enforcement officers and fire department personnel, who may be closer to the emergency, dramatically improves the chance of survival. Having dispatching protocols that include law enforcement and fire departments will strengthen the chain of survival.

The Cardiac Ready Community program's goal is to use enhanced 911 in every community effectively, have all dispatchers trained in EMD, know the location of all AEDs, and have law enforcement and fire personnel dispatched to emergencies as appropriate.

### **Please address the following:**

1. How has your community's public safety answering point (PSAP) been made aware of your Cardiac Ready Community development?
2. How has your community's PSAP been made aware of the location of deployed AEDs in your community?

## EMS Agencies

Having a well-trained EMS agency is critical for an out-of-hospital cardiac arrest or stroke. Utilizing High-Performance CPR, using an AED as soon as possible, and having access to a 12 lead EKG to alert the receiving hospital to the patient's condition are all vital steps in the chain of survival. Access to a Lucas Device will assist with high-performance CPR. Robust performance improvement (PI) using patient data and run reports ensures EMTs are striving for better patient outcomes. Some defibrillators and EKG monitors will print reports to determine the quality of CPR done during a response. An EMS patient record system that collects data on all aspects of a response, including times, treatment, and outcomes, is used for performance improvement. EMS is trained on activation of appropriate alerts based on transport plans.

The Cardiac Ready Community program's goal is that all EMS personnel are trained in High-Performance CPR and that all ambulances are equipped with an AED or other type of defibrillator. Further, services engage in PI through a planned program of run reviews and data analysis.

**Please address the following:**

1. Participation in Cardiac Arrest Registry to Enhance Survival (CARES) required. Data entered into CARES via electronic patient care reporting (ePCR) bridging or by direct data entry.
2. Provide dates mock cardiac arrest drills were conducted at your agency (minimum two times per year) or planned schedule to complete biannually. How many people attended mock code?
3. How is cardiac arrest performance evaluated?
4. Describe your community's EMS agency process for improving quality of care.
5. How does the EMS agency contribute to the community's cardiac readiness?

## Hospital Services

Hospitals that have improved cardiac survival rates are prepared for cardiac and stroke emergencies and share common characteristics. They receive, interpret, and make decisions prior to patient arrival based on incoming EKG transmissions from transporting ambulances. Emergency Department (ED) personnel are all trained and use High-Performance CPR. Critical Access hospitals have established protocols for stabilizing and transferring patients. PCI hospitals (advanced cardiac care hospitals) are STEMI (ST Elevated Myocardial Infarction) prepared. Constant data analysis drives PI through informed decision-making. The goal of the Cardiac Ready Communities is to ensure all hospitals are trained and utilize High-Performance CPR. They are using data analysis to drive PI.

**Please address the following:**

1. Participation in Cardiac Arrest Registry to Enhance Survival (CARES) by direct data entry is required.
2. Is the hospital able to receive ECGs from transferring EMS agency?
3. Provide dates mock cardiac arrest drills were conducted at the facility that receives the community's cardiac arrests (minimum two times per year) or planned schedule to complete biannually. How many people attended mock code?
4. How is cardiac arrest performance evaluated?
5. Describe the hospital's process for improving quality of care.
6. How does the hospital provide feedback on cardiac arrest outcome and performance to transporting EMS agencies?
7. How does the hospital contribute to the community's cardiac readiness?

## Cardiac Ready Community Program Evaluation

An annual review of the system needs to occur to ensure that the Cardiac Ready Community Program is implemented and utilized effectively. Frequent review and practice ensure that all steps in the Chain of Survival and other components are seamlessly combined. By practicing scenarios that include bystander CPR, use of an AED within 3-5 minutes, dispatcher aided CPR, appropriate dispatching of emergency response personnel, and use of high-performance CPR by responders and the hospital, communities will be better prepared for an actual emergency. Having a process in place to implement these practice scenarios, combined with a review of the outcomes, will identify gaps and errors, which will improve responses in the future. Further, reviewing all actual emergency responses to cardiac events will provide valuable information, provided a process is in place to ensure the review happens.

The North Dakota Cardiac Ready Community Project aims to help communities in North Dakota improve their cardiovascular health and increase the chance that individuals suffering from cardiovascular emergencies will have the best possible chance for survival. Implementing a review process is an essential element of performance improvement.

*Upon being designated as a Cardiac Ready Community, it will be expected that your community will continue to track and evaluate the effectiveness of your efforts. After the three-year designation period, communities must reapply for Cardiac Ready Community status to the North Dakota Department of Health, Division of Emergency Medical Systems.*

### **Please address the following:**

1. Describe the established goals/plans to continue Cardiac Ready Community efforts for the three-year designation period and into the future?
2. What is your plan to review and improve components of your Cardiac Ready Community efforts during the three-year designation period?

**For Further Questions, Please Contact:**

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