

Sinclair Community College, Division of Allied Health Technologies

Health Promotion for Community Health Workers – Cardiovascular disease, stroke, and cancer

Class #7 Heart Attack

(date)

Course Objectives:

Know risk factors and causes of heart disease, stroke, and cancer

Know the warning signs of heart attack, stroke, and cancer

Know the most common treatments for diseases of the heart and blood vessels, heart attack and stroke, and contributing conditions like high blood pressure, high blood cholesterol, and diabetes.

Show people how to take greater control over their health

Class/Learning Objectives: By the end of this session, students will be able to:

1. Name the risk factors for heart attack.
2. Describe the warning signs of a heart attack.
3. Describe how a heart attack is diagnosed.
4. Describe how a heart attack is treated.
5. Discuss at least three ways a CHW can help reduce the number of new heart attacks in the community.

Participants:

Instructor(s)

Students

Materials/Resources Needed:

Flipchart, markers, tape, blackboard, chalk and eraser

Handouts:

- 7-1 The Heart
- 7-2 Warning Signs of a Heart Attack
- 7-3 What is Cardiac Rehab?
- 7-4 What Can CHWs Do to Help People Who are at Risk for Heart Attack or Who Have Already Had a Heart Attack?

Training Aid:

- 7-1A Reducing the Risk of a Heart Attack: A Case Study Optional Activity: Learning from Others.

Class Outline

I. Overview

II. Lesson

A. What is a Heart Attack?

B. What are the Warning Signs of a Heart Attack?

- C. What To Do in Case of a Heart Attack
- D. Why is Immediate Medical Attention Important?
- E. How is a Heart Attack Diagnosed?
- F. How is a Heart Attack Treated?
- G. What is Angina?
- H. Don't Delay!
- I. Prepare
- J. CPR
- K. AED
- L. Coping

II. What the Community Health Worker Can Do.

III. Summary

Plan for the Class:

I. Overview

Each year over one million people in the United States have a heart attack.

More than half of those who die will die before reaching the hospital.

Heart attacks are the leading cause of death in the United States.

However, in most cases, heart attacks can be successfully treated if immediate medical attention is provided.

As a community health worker, you play an important role in educating your community about the warning signs of a heart attack, the importance of getting immediate attention, and steps to surviving a heart attack.

III. Lesson

A. What is a Heart Attack?

A heart attack happens when the blood supply to a part of the heart is stopped or severely reduced.

Earlier, we learned how the heart works. We know that the blood vessels supplying the heart muscle with the blood it needs are called coronary arteries. Blood flow to the heart is stopped or reduced when one or more coronary arteries are blocked.

Handout 7-1: The heart

- *Have the CHWs look at the handout of the heart.*
- *Do a quick review of "How the Heart Works" from Class 2*
- *Point out the major blood vessels and coronary arteries and explain how the lack of blood flow to a part of the heart can damage that part.*

If the blood supply is cut off for more than a few minutes, the cells of the heart muscle begin to die.

As the heart muscle cells die or the heart rhythm changes, the ability of the heart to pump blood may be reduced or lost. The part of the heart that depends on the blocked artery for its blood and oxygen is damaged and cannot work properly.

The resulting lack of blood flow can be fatal or can cause damage resulting in disability. The outcome depends on how much the heart is damaged – and partly on how soon the person gets medical care.

Timing is important!

The sooner a heart attack is treated, the less severe the outcome is likely to be.

B. What are the Warning Signs of a Heart Attack?

Typical warning signs, especially for men, are:

- Chest pain or pressure (chest hurts or feels squeezed).
- Pain or pressure in one or both arms, back, neck, jaw.
- Shortness of breath.
- Breaking out in a cold sweat, nausea, light-headedness.

Handout 7-2: Warning Signs of a Heart Attack

Review the handout with CHWs. Stress the importance of not ignoring warning signs. Explain that people may experience any combination of the warning signs. The warning signs may go away and then return. Heart attacks are not always like we see on television.

The warning signs we discussed are the most common ones and most people will experience a combination of them. For example, chest pain most often occurs with shortness of breath. Also, arm pain, sweating and feeling sick at the stomach may occur together. The warning signs may go away and then return again.

Also, a heart attack doesn't always produce warning signs and not everybody will experience a heart attack in the same way.

There are also differences between men and women in the way they experience warning signs of a heart attack.

Women are more likely to have less-specific warning signs than men.

Typical warning signs, especially for women, are:

- Fatigue or tiredness
- Unable to sleep
- Shortness of breath

- Severe indigestion
- Anxiety

It is important to keep in mind, though, that a man or a woman may experience any of the symptoms we've discussed. The warning signs may go away and then return again. Or, a person may not have any obvious warning signs at all, and the only way he or she knows about the heart attack is through later testing.

If you feel you are having a heart attack, you should insist on getting help immediately, even if others do not believe you. If you are wrong about the heart attack, you may be a bit embarrassed, but if you are right, you'll be alive!

It's important to recognize the warning signs of a heart attack and to act fast.

C. What To Do in Case of a Heart Attack?

Call 9-1-1. Call if you think you're having a heart attack.

Anyone having heart attack warning signs needs to receive medical treatment right away. **Don't wait more than a few minutes – 5 minutes at most – to call 9-1-1.**

Calling 9-1-1 for an ambulance is the best way to get to the hospital because:

- Emergency medical personnel (also called EMS, for emergency medical services) can begin treatment immediately – even before arrival at the hospital.
- The heart may stop beating during a heart attack. This is called sudden cardiac arrest. Emergency personnel have the equipment needed to start the heart beating again.
- Heart attack patients who arrive by ambulance tend to receive faster treatment on their arrival at the hospital than those who are driven.

If for some reason, you are having warning signs and cannot call 9-1-1, have someone else drive you at once to the hospital. Never drive yourself to the hospital, unless you absolutely have no other choice.

If a person who appears to be having a heart attack loses consciousness, begin CPR.

D. Why is Immediate Medical Attention Important A heart attack is a medical emergency!!

If medical treatment is provided immediately most heart attacks can be successfully treated.

The chances of survival and limiting the damage to the heart are best if treatment is given within the first hour after a heart attack. The longer treatment is delayed the worse the damage. Each minute treatment is delayed is a minute the heart muscle is without oxygen.

There are many “clot-busting” medications that can quickly stop a heart attack by restoring the flow of blood to the heart muscle. There are medications and tests that can be administered by the emergency medical service (EMS) responders to assist in stopping a heart attack, so it’s important to call 9-1-1 or the local emergency number immediately.

Time is an important factor. Getting immediate medical attention increases the kinds of treatment that can be given and decreases the amount of damage to the heart muscle.

E. How is a Heart Attack Diagnosed?

Diagnosing a heart attack typically includes 4 basic steps. When a person arrives at the hospital with heart attack warning signs, the emergency room staff goes into action and very rapidly takes these steps:

1. Medical history information, including risk factors
2. Physical exam
3. Electrocardiogram (EKG or ECG) to look for damage to the heart
4. Blood tests to detect abnormal levels of certain substances (enzymes) in the blood

F. How is a Heart Attack Treated?

If a heart attack victim gets to an emergency room fast enough, the first treatment will be drugs that dissolve clots. To be effective, these drugs must be used within approximately 1 hour of a heart attack. If drug treatment isn’t done or doesn’t work, surgery may be necessary.

The two most common types of surgery are:

- Coronary Artery Bypass
 - Sometimes emergency bypass surgery is performed following a heart attack. Bypass surgery is cutting and sewing veins or arteries to a place past the blockage.
- Coronary Angioplasty
 - During Coronary angioplasty a tube is passed through an artery, usually in the leg, to the blocked artery in the heart. A small balloon attached to the end of the tube is inflated to open the blocked artery.
 - Sometimes a small object is inserted to hold the artery open. This is called a stent.

G. What is Angina?

Angina is chest pain or discomfort that occurs if the heart doesn't get enough blood.

If the heart is not receiving enough blood then it is not getting the oxygen and nutrients it needs. This usually happens because one or more of the heart's arteries is narrowed or blocked.

Typical angina is uncomfortable pressure, fullness, squeezing or pain in the center of the chest. The discomfort also may be felt in the neck, jaw, shoulder, back or arm. Angina often occurs when the heart needs more blood. Running to catch a bus, for example, could trigger an attack of angina, which walking might not. Angina may happen during physical exercise, strong emotions or extreme temperatures.

Angina is a sign that someone is at risk of heart attack and should not be ignored!

H. Don't Delay!

As we discussed earlier the chances of survival and limiting the damage to the heart are best if people get treated within the first hour after the heart attack.

Sadly, most people wait several hours, or even days before seeking medical attention.

Discussion:

Ask participants to share some reasons or barriers that they know prevents people from seeking medical help from the warning signs of a heart attack?

Note: Give the group about 5 minutes to answer.

Possible answers:

People often take a wait-and-see approach, delaying because they:

- *Think it is heartburn.*
- *Don't recognize the warning signs.*
- *Don't want to be a bother.*
- *Decide to wait and see if the pain goes away.*
- *Are afraid of being embarrassed if it was a false alarm.*
- *Think only elderly people have heart attacks.*
- *Are hoping it isn't a heart attack.*
- *Plan to make an appointment with the doctor.*
- *Have no medical insurance.*

The longer the delay in getting treatment, the more damage the heart is likely to suffer. Reacting quickly to signs of a heart attack can greatly increase the chances of surviving a heart attack.

If you or someone else is having heart attack warning signs:

Call 9-1-1

Don't wait more than a few minutes – 5 minutes at most – to call **911**.

If symptoms stop completely in less than 5 minutes, you should still call your doctor or nurse.

I. Prepare

The T.I.M.E. Method was developed by the National Heart, Lung, and Blood Institute (NHLBI) for doctors to use with heart patients, but it's an excellent guide for CHWs, also.

The T.I.M.E. Method

(From Act in Time to Heart Attack Signs. National Heart, Lung, and Blood Institute – www.nhlbi.nih.gov)

Talk with people at risk and their families about:

- Risk of heart attack.
- Recognizing warning signs.
- Right action steps to take for rapid action
- Rx – if their doctor told them to take certain medicines when warning signs occur
- Remembering to call 9-1-1 quickly – within 5 minutes.

Ask about:

- Feelings about heart attack.
- Problems with recognizing warning signs and how to respond to warning signs.
- Personal and family experiences with medical treatment.

Make a plan:

- Help people at risk and their family members to make a plan for exactly what to do in case of warning signs.
- Encourage patients and their family members to practice the plan.

Make sure the person at risk and his or her family members understand:

- Risk in delaying.
- The risk and the need for a plan for action.

J. CPR

Cardiopulmonary Resuscitation (CPR) is mouth-to-mouth respiration (breathing into another's mouth) and chest compression (pressing on another's chest at a steady pace).

CPR provides oxygenated blood to the brain and heart and keeps these organs alive until defibrillation can shock the heart into a normal rhythm.

If CPR is started within 4 minutes of collapse and defibrillation provided within 10 minutes a person has a 40% chance of survival.

K. AED (Automated External Defibrillator)

An AED is a medical device designed to “shock” the heart of a person in cardiac arrest (no pulse or breathing) into a survivable rhythm. This is a time sensitive treatment. For every minute without immediate CPR and defibrillation, the odds of survival decrease 7% to 10%.

Public access to defibrillation (PAD) means making AEDs available in public and/or private places where large numbers of people gather or people who are at high risk for heart attacks live.

For more information contact your local American Heart Association office.

CHWs should become certified in CPR and AED!

L. Coping

A positive attitude and outlook is important to recovering from a heart attack or heart surgery for those fortunate enough to survive the immediate event. It is strongly recommended that community Health Workers work with resources within the community to make sure that community member service the full amount of support they need.

Discussion:

Ask CHWs how they think they would feel if they had recently suffered a heart attack. Write their responses on the flipchart. Possible responses include:

- *Scared: uncertain of the future.*
- *Overwhelmed: too many things to remember or changes to make in their life.*
- *Helpless: feel they can't do anything to control their heart health.*
- *Angry: that it happened to them.*
- *Grief: over the loss of good health.*
- *Relief: at having a change to start over.*
- *Thankful: for having survived.*

Ask them which responses they feel that they can help with in their role as Community Health Workers. Put a check next to these responses. Then ask CHWs how they can help a person who is

recovering from a heart attack cope with his or her reactions. Write these responses on the flipchart as well. Possible responses include:

Handout 7-3: what is Cardiac Rehab?

Review the handout with the CHWs. CHWs should remind those who have had a heart attack that rehabilitation can do a lot to help them feel better faster, get back to normal activities, and reduce future chances of heart trouble.

Optional Activity:

If possible, invite a person who has had a heart attack to share his or her experience with the class. Allow time for questions and answers. Emphasize the importance of a strong, positive attitude in recovering from a heart attack and leading a life that is heart healthy. It is important that a person who has heart diseases learn to live with it. and that he or she make changes in his or her life to minimize the risk that it poses to his or her overall health. At the same time, however, the person should not make it the central focus on his or her new life.

IV. Summary

Handout 7-4: What can CHWs do to help people who are at risk for heart attack or who have already had a heart attack?

Ask the CHWs what they think they can do to help people who are at risk for heart attack? Then ask what they think they can do to help people who have already had a heart attack?

Ask for suggestions and give cues to help them remember the importance of teaching and reminding people to keep their cholesterol under control by taking cholesterol lowering medicine regularly, keeping medical appointments, and by knowing signs and acting in time and calling 9-1-1. Review Handout 7-4 with students.

Training Aid 7-1: Reducing the Risk of a Heart Attack: A Case Study
Pass out copies of Training Aid 7-1. Have the class form groups 3 or 4 ask the first question and have each group determine an answer on their own. Ask each group for their answer. Discuss if they answer differ. Continue for questions 2,3, 4, and 5.

What are the risk factors for heart attack?
What are the warning signs of a heart attack?
How is a heart attack diagnosed?
How is a heart attack treated?

Resources:

Your Heart Your Life – A Lay Health Educator's Manual. Office of Prevention, Education, and Control; National Heart, Lung, and Blood Institute; National

Institutes of Health; U.S. Department of Health and Human Services.
www.nhlbi.nih.gov/health/prof/heart/latino/lat_mnl.htm

Act in Time to Heart Attack Signs. National Heart, Lung, and Blood Institute; National Institute of Health; U.S. Department of Health and Human Services, in partnership with the American Heart Association.
www.nhlbi.nih.gov/actintime/index.htm.

Honoring the Gift of Heart Health. National Heart, Lung, and Blood Institute and Indian Health Service; National Institute of Health; U.S. Department of Health and Human Services.

American Heart Association. www.americanheart.org

AED Implementation Guide. American Heart Association.
<http://www.americanheart.org/presenter.jhtml?identifier=3027225>