Sinclair Community College, Division of Allied Health Technologies

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

Class #8 Stroke
(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 signs of heart disease and other conditions that can lead to heart attack and stroke
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.
Know how they can help people in the community living with heart disease or disability due to a stroke take care of themselves and prevent a second heart attack or second stroke.
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. Describe the two main types of stroke
2. List major risk factors for stroke
3. Describe the warning signs for stroke
4. Explain how medicines prevent stroke
5. Explain some of the methods used to treat stroke
6. Describe the effects of a stroke
7. Describe some of the methods used for stroke rehabilitation
8. Explain how CHWs can help people who are at risk for stroke and those who have had stroke

Participants:
Instructor(s)
Students

Materials/Resources Needed:
Flipchart, markers, tape, blackboard, chalk and eraser

Handouts:

- 8-1 What happens when the brain doesn't get enough oxygen?
- 8-2 What is a stroke?
- 8-3 Risk factors for stroke.
- 8-4 Medicines to prevent stroke.
- 8-5 Tips for taking medicine to prevent stroke.
- 8-6 Stroke: What happens at the hospital?

- 8-7 What can CHWs do to help people who are at risk for stroke or who have already had stroke?

Training Aid:

- 8-1A Recognizing warning signs of stroke.

Class Outline

I. Overview
II. Lesson
    A. What is a Stroke or Brain Attack?
    B. What are the Risk Factors for Stroke?
    C. What are the Signs of a Stroke?
    D. Why call 9-1-1?
    E. How Do Medicines Help Prevent a First or Second Stroke?
    F. How Does a Doctor Diagnose a Stroke?
    G. How is a Stroke Treated?
    H. What are the Results of Stroke?
    I. What is Stroke Rehabilitation?

III. Summary
IV. Preview of next class

Plan for the Class:

I. Overview

Every 45 seconds, someone in America has a stroke.

Each year, about 700,000 people have a stroke (500,000 are first attacks and 200,000 are repeat attacks.)

Blacks have almost twice the risk of first strokes compared to whites.

Stroke is the third leading cause of death for women and men in the United States.

Over 100,000 women and 63,000 men die each year from stroke.

Stroke is a leading cause of serious, long term disability in the U.S.

III. Lesson

A. What is a Stroke or Brain Attack?

A stroke, or brain attack, occurs when the brain does not receive enough oxygen through the blood that it needs to help the brain function.

Like all parts of the body, the brain needs a regular flow of blood to provide it with the oxygen and nutrients that it needs to function and

stay healthy. Without oxygen, brain cells die in a few minutes and cannot be replaced.

Handout 8-1: What Happens When the Brain Doesn't Get Enough Oxygen?
Review handout 8-1 with the CHWs. Ask them what they think is happening in the small box in the picture of the brain.

The two main ways a stroke can occur are:

- A blood vessel, in the brain, can become blocked by a clot. (This is called an ischemic stroke.) 80% of strokes are ischemic.
- A blood vessel, in the brain, can burst. (This is called a hemorrhagic stroke.)

Either type of stroke can cause serious damage to the brain.

Strokes can affect your ability to move and your ability to speak, ability to see and to remember.

The amount of damage differs from one stroke victim to another.

Handout 8-2: What is a Stroke?
Ask CHWs to review the top half of the handout (what is a stroke?). Do they understand the two types of stroke?

B. What are the Risk Factors for Stroke?
Stroke shares many risk factors with heart disease.

Handout 8-3: Risk Factors for Stroke
Review Handout 8-3 with the CHWs. Ask them if they can think of reasons why heart disease or use of tobacco might increase the risk of a stroke. Help guide their discussion.

Ask them if they can think of other conditions or behaviors that might increase the risk of stroke. Write their responses on the flipchart. If not already named, add and discuss the risk factors listed below under "other risk factors."

Risk factors for stroke are:

- *Hypertension or high blood pressure (most important risk)*
- *Heart and artery disease*
- *Diabetes (3 times the risk for stroke compared to non-diabetic)*
- *Smoking (or living or working with people who smoke)*

Other risk factors are:

- *High blood cholesterol (A diet high in fat and cholesterol)*
- *Not enough physical activity*

- *Atrial fibrillation (irregular heart beat that increases risk of stroke up to 6 times)*
- *Increasing age*
- *Diet (too much salt, fat and cholesterol causes high blood pressure and high blood cholesterol)*
- *Obesity or being overweight*
- *Alcohol abuse (too much alcohol)*
- *Sleep apnea (irregular breathing)*
- *Stress (that makes blood pressure go up)*
- *Family or personal history of heart disease or stroke*
- *Race, with African-Americans having a higher risk then other populations (this may be because many African Americans have high, uncontrolled blood pressure)*
- *Gender (men tend to have strokes at an earlier age than women)*
- *Prior stroke or heart attack*

Having one or more risk factors does not mean a person will have a stroke, but it does increase the chances.

Making the same life-style changes to reduce the risk of heart disease will reduce the risk of stroke. If you make lifestyle changes such as eating a healthier diet with reduced salt and sodium, are more physically active, stop smoking, and have a healthy weight, you can prevent or control the most important risk factors for stroke – high blood pressure.

If your doctor advises that you take medicines to control high blood pressure you will greatly reduces your risk for stroke.

Activity: Modifying Risk Factors

- *Ask the CHWs to break into groups of equal numbers.*
- *Give each group two different risk factors related to life style.*
- *Have each group talk about how they help their peers to change unhealthy habits that increase the risk for stroke.*
- *After 10 – 15 minutes, ask the groups to wrap-up.*
- *Ask each group to share their ideas on how to help people change unhealthy habits that can lead to stroke.*

C. What are the Signs of a Stroke?

Not all strokes are the same, but there are general signs to warn you that you may be having a stroke

The signs are:

- Sudden weakness or loss of feeling on one side of the body on the face, arms or legs.
- Sudden loss of vision (trouble seeing) in one or both eyes.

- Sudden difficulty speaking clearly or understanding what others are saying.
- Sudden severe headaches with no known cause.
- Sudden trouble walking or moving, dizziness, unsteadiness or sudden falls.
- Sudden confusion.

These warning signs can occur for a few minutes or can last hours.

Often, a stroke can occur without you knowing that anything is happening at all.

You may know right away that you are having a stroke, or you might not notice that something is wrong until hours or days after the stroke has already occurred.

Handout 8-2: What are the Warning Signs of Stroke?
Ask the CHWs to review the bottom half of Handout 8-2 (What are the Warning Signs?). Ask if there are any questions.

Review Handout 6-1. Emphasizing how important it is to know the signs of heart failure. If someone you know has one or more signs, they must see a doctor as soon as possible

Discussion: Recognizing Stroke Warning Signs
Ask if the CHWs know anyone who has had a stroke and survived.

- *Did they know right away that they were having a stroke?*
- *How did they know they were having, or had already had, a stroke?*
- *Did they get treatment immediately or did it take a while for them to seek treatment?*
- *How did the stroke change their lives?*

Allow CHWs time to share their stories and to ask questions about stroke.

Tell them it is important for Community Health Workers to help community members recognize the warnings signs of stroke – for their own health, and because they may see the warning sings in someone else who won't know what is happening.

Activity with Training Aid, 8-1: Recognizing the Warning Sings of Stroke
This activity is three role plays that help CHWs learn the skills needed to teach community members about the warning signs of a stroke and the importance of getting emergency care, quickly, when a stroke occurs

1. *Ask CHWs to break into 4 or 5 groups.*

2. *Hand out Training Aid 8-1, "Recognizing the Warning Signs of Stroke."*
3. *Read the first role play to the students.*
4. *Ask the students in each group to decide how to answer the questions. One person in each group writes the answer on a piece of paper.*
5. *Do the same for Role Play 2 and Role Play 3.*
6. *Allow 5 minutes for the groups to complete each role play (15 minutes total).*
7. *Go back to Role Play 1. Ask one person from each group to read their answers to the questions.*
8. *Do the same for Role Play 2 and Role Play 3.*

D. Why Should People Call 9-1-1? Because Stroke is an Emergency

A stroke (brain attack) is a medical emergency and every minute counts. It is very important to act in time.

As with a heart attack **it is critical to get to the hospital for treatment quickly.**

If someone is having a stroke, it is important to **call 911** or the local emergency number right away. There are treatments that can dramatically improve recovery, but only if started within one hour after the stroke.

E. How do Medicines Help Prevent a First or Second Stroke?

If you have had a stroke or are at high risk for having a stroke, your doctor may prescribe medicine that will help prevent a stroke.

There are several types of medicine that help prevent stroke. Your doctor may prescribe one or more of these drugs. These include:

Blood Pressure Lowering Medicines if Blood Pressure is high.
Keeping blood pressure down is very important. High blood pressure is a leading cause of stroke. High blood pressure damages blood vessels in the following ways:

- If blood flow presses against the walls of the blood vessel with too much force, they lose their ability to stretch and they become thick. This narrows the blood vessel and reduces blood flow.
- Blood clots form in damaged areas of blood vessel walls.
- High blood pressure can damage blood vessel walls and cause them to rupture.

Cholesterol Lowering Medicines if Blood Cholesterol is high.

Insulin and Oral Diabetes Medicines for Persons with Diabetes to Reduce High Levels of Blood Sugar. Diabetics are at greater risk for strokes than non-diabetics.

To prevent a second stroke:

- Anticoagulants – (blood thinners) prevent the blood from clotting and causing a stroke.
- Antiplatelet agents – platelets are blood cells that help the blood clot. Antiplatelet medicines prevent platelets from causing a clot.

Handout 8-4: Medicines to Prevent Stroke

Review the table that describes the types of medicines, how they work, and what patients need to know. Discuss how CHWs can help patients understand the importance of taking medicines as prescribed.

Handout 8-5: Tips for Taking Medicine to Prevent First or Repeated Stroke

Review Handout 8-5 with CHWs. Help them think of answers doctors might give to the questions in the "Questions to ask a doctor" box. Discuss with students why it is important for a patient to know the answers to these questions.

F. How Does a Doctor Diagnose a Stroke?

In order to determine if a stroke has occurred, a doctor or another person on the emergency department staff of the hospital will:

- Ask about the warning signs experienced.
- Ask about health history.
- Measure blood pressure and pulse.
- Check the eyes.
- Perform other tests to get an idea of what is happening in the brain.

Handout 8-6: Stroke: What Happens at the Hospital?

Review Handout 8-6 with CHWs. Ask what information they might like to have if they were in an emergency room with a possible stroke.

Other tests must be done to determine if there is bleeding, the amount of damage and the location.

These tests will also determine whether there is damage in the brain and if so, where. The tests are:

- Tests that create pictures of the brain and look similar to ordinary X-rays. (CT, or cat scan, and MRI)
- Tests that measure the electrical activity of the brain and give useful information about how it's working.
- Finally, blood flow tests that detect blockages in blood vessels.

Emergency personnel must decide on a case-by-case basis whether such tests will be useful, and if so, which ones to use.

G. How is a Stroke Treated?

The key to stroke survival is to get medical attention as soon as possible.

For many strokes, if treatment is given within a few hours, a good recovery with as little disability as possible.

Treatment for stroke will, most likely, include medication – usually to prevent blood clots or to lower blood pressure in those who have high blood pressure.

One of the most promising new treatments for a stroke victim is **tPA** (tissue plasminogen activator):

- tPA must be given within three hours of the start of stroke symptoms.
- That's why it's so important that everyone recognize stroke as an emergency and take action immediately.

Treatment for stroke may also include surgery to remove blockage in a neck artery.

Newer treatments use devices inserted in blocked or narrowed vessels.

The amount of time a person has to stay in the hospital after a stroke depends on the amount of damage to the brain.

The more damage caused, the longer the person will have to stay in the hospital.

H. What are the Results of Stroke?

The effects of a stroke depend on where in the brain the damage is and how much brain tissue is damaged.

A person who has had a stroke and survived may have many physical problems or other disabilities. After the stroke, the person may recover completely or only partially.

A person who has had a stroke is likely to face emotional problems in addition to the physical ones.

Stroke disabilities include:

- Paralysis or inability to move (usually one side of the body)
- Vision problems
- Memory loss
- Difficulty talking or understanding what others are saying

- Change in behavior, such as asking question after question

A stroke survivor may cry easily or have sudden mood swings, often for no apparent reason. Laughing uncontrollably also may occur but isn't as common as crying.

A person can suffer depression and mood swings which are a result of the stroke-related brain damage itself. Or a person can suffer depression as he or she adjusts to changes in his or her self or home. Depression is common.

A person may react with anger, depression, or withdrawal as he or she goes from being an independent person on whom others leaned on for support to a highly dependent person who feels like a burden to family and friends.

Discussion: How stroke affects a person

- *Ask CHWs if they have a friend or relative who has had a stroke and survived.*
- *Ask them to share some of the physical and emotional changes that happened to the person as a result of the stroke.*
- *List their answers on a flipchart.*
- *Ask if the changes were permanent or if recovery from the stroke was complete.*

I. What is Stroke Rehabilitation?

To recover from physical and other disabilities that result from a stroke, you will need therapy or rehabilitation (rehab).

The type of therapy or rehab you need depends on the disabilities you have.

Different types of therapy include:

Physical therapy: if there is a problem with your movement (for example, you cannot walk or move your arms or keep your balance) you will need physical therapy.

Speech therapy: if there is a problem with your speech (the tongue cannot properly say words) you will need speech therapy.

Occupational therapy: if you have lost memory or knowledge, you will have occupational therapy to re-teach activities like bathing and dressing that are essential to daily living.

Emotional support therapy: Depression following a stroke can be eased with therapy.

The different forms of therapy cannot repair the brain, but they can teach the brain to work in different ways.

It helps you become stronger and more capable and confident.

IV. Summary

What are some of the ways you could support community people who have had a stroke?

Handout 8-7: What can CHWs do to Help People Who are at Risk for Stroke or Who Have Already Had a Stroke

Review Handout 8-7 with CHWs. Ask for suggestions and give cause to help them remember the importance of teaching and reminding people to keep their blood pressure under control, regularly checking their blood pressure, keeping medical appointments, knowing signs, acting in time, etc. What can CHWs do to help people who are at risk for stroke or who have already had a stroke?

What are the two main types of stroke?
What are the risk factors for stroke?
What are the warning signs for stroke?
How is stroke treated?
What physical and emotional effects can a stroke have on a person?
What type of therapy are used for stroke rehab?

Resources:

New Patient Education Tool Kit, Know Stroke Poster, Know the Signs: Act in Time 1) page sheet on how to recognize stroke and what to do): National Heart, Lung, and Blood Institute, www.nhlbi.nih.gov

National Institute of Neurological Disorders and Stroke
www.ninds.nih.gov/disorders/stroke/stroke.htm

Survivor and Caretaker Resources, National Stroke Association,
www.stroke.org

Patient Handouts and Operation Stroke (community education and community-wide events): American Stroke Association 1-888-487-7653 or
www.strokeassociation.org

American Stroke Association patient handouts:

Let's Talk About Blood Pressure and Stroke
Let's Talk About Risk Factors for Stroke
Let's Talk About Hemorrhagic Stroke and Their Causes
Let's Talk About Ischemic Strokes and Their Causes
Let's Talk About Stroke Warning Signs
Let's Talk About Anticoagulants and Antiplatelet Agents

Let's Talk About Lifestyle Changes to Prevent Stroke