STROKE EDUCATION TOOLKIT
KEY MESSAGES

• According to the American Stroke Association, every 40 seconds someone has a stroke — and if a stroke doesn’t kill, it may cause physical or mental disability. Call 9-1-1 if you think you or someone you’re with is having a stroke.

• Many people in Washington die or are disabled from heart attack, cardiac arrest, and stroke because they do not get lifesaving treatment in time. Reducing the time it takes for people having a heart attack or a stroke to get medical care is the goal of Washington’s Emergency Cardiac and Stroke System. Calling 9-1-1 when you or someone else is experiencing heart attack or stroke symptoms activates the Emergency Cardiac and Stroke System.

• Think F.A.S.T for the most common signs and symptoms of stroke, and call 9-1-1 immediately if you or someone you’re with has signs of a stroke
  ➢ Face. Ask the person to smile. Does the face look uneven?
  ➢ Arms. Ask the person to raise both arms. Does one arm drift down or is it unable to move?
  ➢ Speech. Ask the person to repeat a simple phrase. Does their speech sound strange? Strange speech could be slurred, the wrong words may come out, or the person is unable to speak.
  ➢ Time to call 9-1-1.

• A stroke can happen to anyone, at any time and at any age. Learn to recognize a stroke, because in a stroke emergency, time lost is brain lost. For every minute you don’t get help, more brain cells die.

• To learn more about Washington’s Emergency Cardiac and Stroke System, visit www.doh.wa.gov/ecs or heart.org/call911
STROKE FACTS

STROKE IS A 'BRAIN ATTACK'
Stroke is often called a “brain attack” because it affects the arteries leading to and within the brain. A stroke happens when an artery that carries oxygen and nutrients to the brain is either blocked by a clot or bursts. When that happens, part of the brain cannot get the blood (and oxygen) it needs and starts to die.

Ischemic stroke, about 80 percent of all strokes, is caused by a severe blockage of blood to part of the brain. Most commonly, blood flow through an artery is blocked by atherosclerosis (narrowed arteries).

Hemorrhagic stroke occurs when arteries break, causing bleeding into or around the brain.

Signs of stroke
- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body.
- Sudden confusion, trouble speaking or understanding.
- Sudden trouble seeing in one or both eyes.
- Sudden trouble walking, dizziness, loss of balance or coordination.
- Sudden severe headache with no known cause.
If you see even one of these signs, call 9-1-1 immediately! Minutes matter!

Think F.A.S.T!
F.A.S.T is an acronym for the most common signs and symptoms of stroke. Call 9-1-1 immediately if you or someone you’re with has signs of a stroke
- **Face.** Ask the person to smile. Does the face look uneven?
- **Arms.** Ask the person to raise both arms. Does one arm drift down or is it unable to move?
- **Speech.** Ask the person to repeat a simple phrase. Does their speech sound strange? Strange speech could be slurred, the wrong words may come out, or the person is unable to speak.
- **Time** to call 9-1-1.

Some strokes can’t be prevented. Most strokes can be avoided by treating risk factors, such as high blood pressure, high blood cholesterol and diabetes. It is very important to get medical treatment quickly. The best way to do that is by calling 9-1-1.

Treatments can be given in an ambulance or shortly after arriving at a hospital that can stop a stroke by quickly dissolving a blood clot in an ischemic stroke, or stopping the bleeding of a hemorrhagic stroke.

Time is brain – there is a short period of time after the symptoms start, when serious damage can be prevented. Rehabilitation after a stroke helps people overcome disabilities that result from damage to the brain.

September 2012
NATIONAL STATISTICS
Source: American Stroke Association

- About 795,000 Americans each year suffer a new or recurrent stroke. That means, on average, a stroke occurs every 40 seconds.
- Stroke kills more than 137,000 people a year. That's about 1 of every 18 deaths. It's the No. 4 cause of death.
- On average, every 4 minutes someone dies of stroke.
- About 40 percent of stroke deaths occur in males, and 60 percent in females.
- The 2006 stroke death rates per 100,000 population for specific groups were 41.7 for white males, 41.1 for white females, 67.7 for black males and 57.0 for black females.
- Americans will pay about $73.7 billion in 2010 for stroke-related medical costs and disability.

Download the statistical PPT slide sets for stroke: http://www.heart.org/idc/groups/ahamah-public/@wcm/@sop/@smd/documents/downloadable/ucm_436717.pdf

WASHINGTON STATE STATISTICS
Source: WA State Department of Health

- Stroke is the sixth leading cause of death in the U.S. and the fourth leading cause in Washington State. Stroke is a leading cause of serious, long term disability in both the United States and Washington State.
- Washington State stroke mortality rates have decreased from 64 deaths per 100,000 people in 1999 to 38 deaths per 100,000 people in 2010.
- In 2009, Washington ranked 32nd highest of all states in stroke death rates. Might want to remove since we are not on high end of burden (range of age-standardized rates was from a low of 27 deaths per 100,000 to a high of 52 deaths per 100,000).
- Stroke caused 2,529 deaths in 2010.
- In 2010, 14,941 hospitalizations were due to stroke. This is about 3 percent of all hospitalizations (excluding those related to childbirth).
- According to 2009 self-reported data from the Washington State Behavioral Risk Factor Surveillance Survey (BRFSS), 2 percent of adults reported that they had a stroke. This data does not include adults who either did not survive a stroke or who became too disabled to participate in the survey.
• Four counties had stroke death rates higher than the state average: Asotin, Clallam, Pierce, and Spokane.

• Two counties had stroke death rates lower than the state average: San Juan and King.
STROKE PROCLAMATION

The State of Washington

Proclamation

WHEREAS, stroke is the third leading cause of death and the number one cause of disability in Washington State; and

WHEREAS, the most effective stroke treatments are only available if the stroke is recognized and diagnosed within the first few hours of the initial symptoms; and

WHEREAS, every minute counts for stroke patients and acting F.A.S.T. can assure patients receive the treatments they desperately need. The following tool can help you recognize stroke symptoms and act F.A.S.T.:  
FACE Ask the person to smile. Does one side of the face droop?
ARMS Ask the person to raise both arms. Does one arm drift downward?
SPEECH Ask the person to repeat a simple sentence. Are the words slurred?
TIME Can they repeat the sentence correctly?
TIME If the person shows any of these symptoms, time is important. Call 911 to get to the hospital fast.

WHEREAS, Stroke Awareness Month is a time to increase awareness about the prevention of strokes and how to recognize the symptoms;

NOW, THEREFORE, I, Christine O. Gregoire, Governor of the state of Washington, do hereby proclaim May 2012 as

Stroke Awareness Month

in Washington State, and I urge all citizens to join me in this special observance.

Signed this 6th day of April, 2012

Governor Christine O. Gregoire
Sample Proclamation Language

WHEREAS, stroke is the 6th leading cause of death and a leading cause of disability among adults in Washington State; and

WHEREAS, 14,941 Washingtonians were hospitalized for stroke in 2010, and 2,529 died from stroke (about 7 deaths per day); and

WHEREAS, the direct and indirect cost of stroke in Washington State is estimated at $1.3 billion; and

WHEREAS, the most effective stroke treatments are only available if the stroke is recognized and diagnosed within the first few hours of the first symptoms; and

WHEREAS, the Department of Health has created the Washington State Emergency Cardiac and Stroke System in partnership with emergency medical services providers and hospitals across the state to make sure stroke patients get timely treatment; and

WHEREAS, Americans are more aware of the risk factors and warning signs for stroke than in the past, but according to a recent survey, less than a third of adults still can’t identify any symptoms; and

WHEREAS, the most effective stroke treatments are only available if the stroke is recognized and diagnosed within the first few hours of the first symptoms, and every minute counts for stroke patients. Acting F.A.S.T. can assure patients get the stroke treatments they desperately need.

Use the following tool to help recognize stroke symptoms and act F.A.S.T.:

FACE Ask the person to smile. Does one side of the face droop?
ARMS Ask the person to raise both arms. Does one arm drift downward?
SPEECH Ask the person to repeat a simple sentence. Are the words slurred? Can he/she repeat the sentence correctly?
TIME If the person shows any of these symptoms, time is important. Call 911 or get to the hospital fast. Brain cells are dying; and

WHEREAS, Stroke Awareness Month is the American Stroke Association’s and the National Stroke Association’s national call to increase awareness of stroke and to inspire citizens to learn about the signs of stroke and how to prevent a stroke.
NOW, THEREFORE, I, Christine O. Gregoire, Governor of the State of Washington, in recognition of the importance of the ongoing fight against stroke, do hereby proclaim May 2011 as “Stroke Awareness Month” in Washington State. I urge all citizens to learn the signs and symptoms of stroke and call 911 immediately if you think someone’s having a stroke. Minutes matter! Find out which hospitals in your community can treat stroke. By increasing awareness and getting treatment right away, we can save lives and reduce the devastating disability stroke can cause.

Signed this __ day of May 2012

Governor Christine O. Gregoire
PRESS RELEASE TEMPLATE

FOR IMMEDIATE RELEASE

Date

MEDIA CONTACT:
Name
Phone
Email

May is American Stroke Month – think and act F.A.S.T. in case of a stroke

CITY, WA — Washington Governor Christine Gregoire has proclaimed May as "Stroke Awareness Month" as part of a statewide call to increase awareness of stroke warning signs and improving the number of stroke patients that receive lifesaving treatment in time.

Many people in Washington die or are disabled from stroke because they do not get the appropriate medical treatment within the recommended time window, which is three hours for the most common type of stroke. Increasing the number of stroke patients who get timely treatment is one of the goals of Washington’s Emergency Cardiac and Stroke System. To activate the system, citizens must be more vigilant about recognizing the stroke warning signs and promptly calling 9-1-1 when they or someone else is experiencing stroke symptoms.

Stroke is the fourth leading cause of death nationwide and a leading cause of severe, long-term disability, according to the American Stroke Association, a division of the American Heart Association. “Stroke is a life-threatening medical emergency. For every minute you don’t get help, more brain cells die, increasing the likelihood of permanent disability or even death. The best way to get medical treatment quickly is to call 9-1-1,” said SPOKESPERSON NAME, TITLE.

The signs and symptoms of a stroke include:

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden, severe headache with no known cause

An easy way to recognize stroke is to think F.A.S.T.:

- **Face.** Ask the person to smile. Does the face look uneven?
- **Arms.** Ask the person to raise both arms. Does one arm drift down or is it unable to move?
• **Speech.** Ask the person to repeat a simple phrase. Does their speech sound strange? Strange speech could be slurred, the wrong words may come out, or the person is unable to speak.

• **Time** to call 9-1-1.

**F.A.S.T.** is an acronym for the most common signs and symptoms of stroke.

Washington has changed the way emergency medical services (EMS) respond to cardiac and stroke patients. With the new Washington State Emergency Cardiac and Stroke System, modeled after the state’s trauma system, standard guidelines for EMS call for patients to be taken directly to a hospital that can provide specialized care. If there isn’t one close by, patients will be rapidly assessed by the local hospital and transferred immediately to the treating hospital. The public can help by learning heart attack and stroke symptoms and calling 9-1-1 immediately when they or someone else is experiencing these symptoms.

Stroke Awareness Month is the American Stroke Association’s and the National Stroke Association’s call to increase awareness of stroke and to inspire citizens to learn about the signs of stroke and how to prevent a stroke. To learn more about Washington’s Emergency Cardiac and Stroke System, visit [www.doh.wa.gov/ecs](http://www.doh.wa.gov/ecs).


# # #

**Resources:**

To learn more about Washington’s Emergency Cardiac and Stroke System, visit [www.doh.wa.gov/ecs](http://www.doh.wa.gov/ecs).

To learn more about stroke, click [here](http://www.doh.wa.gov/ecs).

To find out if you are in ideal health or at risk for heart disease or stroke, visit [My Life Check](http://www.doh.wa.gov/ecs).
SAMPLE ARTICLE
By Teresa McCallion, East Pierce Fire and Rescue

Pierce County Benefits from New Comprehensive Stroke System

*Early recognition of stroke signs and 9-1-1 transport to a designated stroke center crucial for patient survival and recovery*

Pierce County is one of the first in the state to implement a new comprehensive system of care for stroke patients. The system involves 911 dispatchers, firefighters and paramedics and a system of designated primary and comprehensive stroke hospitals that can provide focused stroke patient assessment and treatment, in-hospital and rehabilitation services.

It all starts with calling 9-1-1. Dispatchers quickly process 9-1-1 calls and assess whether a patient is having possible stroke symptoms, providing an early heads-up for responding fire and EMS units.

Firefighters and paramedics arrive and quickly assess the patient for possible stroke and consult with the base station hospital for the appropriate destination. It’s equally crucial that the time the patient’s “last normal” is identified (i.e. “two hours ago” or “it started at 2:30 P.M.”) since this will impact what treatments may be available for the patient, and may determine to which hospital the patient is taken. Paramedics also notify the hospital with a “Stroke Alert” radio contact, giving the hospital time to assemble a team so they can be prepared for the arrival of the patient.

Pierce County is fortunate to have three specialized physicians, called “stroke interventionalists” who provide around the clock advanced treatment opportunities for stroke patients. The stroke patient system of care is reducing time to treatment and helping to improve outcomes for many patients. However, the system can’t work, if patients don’t recognize the signs and symptoms of a stroke and call 9-1-1.

What is a stroke?

Strokes take a terrible toll each year in the United States. Almost 795,000 people will suffer a stroke, and 140,000 people will die annually. Strokes are the leading cause of disability in the U.S. Nearly one-quarter of strokes occur in people under the age of 65.

A stroke occurs when a blood vessel that carries oxygen and nutrients to the brain is either blocked by a clot or the blood vessel ruptures. When that happens, part of the brain cannot get the blood (and oxygen) it needs, so it starts to die.

The signs and symptoms of a stroke include:

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden, severe headache with no known cause
A drug called tPA is the only FDA-approved medication for the treatment of stroke—but it has to be given within three hours of the start of stroke symptoms. Some stroke interventionalists can use other treatments, such as guiding thin wires from the femoral artery up into the brain to try to open the arteries.

Time is crucial—time lost equals lost brain cells. If treatment is started early, many patients can be effectively treated, minimizing the impact of a stroke. Every minute counts, so “when in doubt—check it out!” and call 9-1-1.
SOCIAL MEDIA MESSAGES

If you think you are having a stroke, call 911 FIRST and FAST. www.heart.org/call911 [71 characters]

May is American Stroke Month. Every 40 seconds someone has a stroke. Learn the warning signs and call 911. www.heart.org/call911 [128 characters]

Saving a life starts with you. Think F.A.S.T to identify the stroke warning signs. www.heart.org/call911 [104 characters]

Before you get in your car or call a friend, call 911 FIRST and FAST if you suspect a stroke. www.heart.org/call911 [116 characters]

Suspect a stroke? Don’t wait! Fast care is a matter of life and death. Call 911 FIRST and FAST! www.heart.org/call911 [117 characters]

Care starts immediately with Washington’s Emergency Cardiac & Stroke System. Call 911 FIRST and FAST! www.heart.org/call911 [123 characters]

Saving a life starts with you. Learn more about stroke warning signs – the life you save could be yours. www.heart.org/call911 [126 characters]

Emergency services determine if it’s a stroke, starts immediate care, and gets you to a medical facility. Call 911 FIRST and FAST! www.heart.org/call911 [131 characters]
PUBLIC SERVICE ANNOUNCEMENTS

WA Emergency Cardiac and Stroke Network

NW-CN – Call 911 PSAs
Heart Attack
Stroke

American Heart Association/American Stroke Association

Note – PSAs cannot be edited without permission from American Heart Association. Contact Francesca Minas or Krista Wood, 206-834-8611.

Video:
Stroke Early Response
http://www.heart.org/HEARTORG/General/PSA--Video--Stroke-Early-Response_UCM_315466_Article.jsp
High Blood Pressure
http://www.heart.org/HEARTORG/General/PSA--Video--High-Blood-Pressure_UCM_315464_Article.jsp

Audio:
Stroke:
http://www.heart.org/HEARTORG/General/PSA--Audio--Stroke_UCM_315516_Article.jsp
Blood Pressure:
http://www.heart.org/HEARTORG/General/PSA--Audio--High-Blood-Pressure_UCM_315513_Article.jsp

Print:
Stroke Early Response
http://www.heart.org/HEARTORG/General/PSA--Print--Stroke-Early-Response_UCM_314802_Article.jsp
Stroke in African Americans
http://www.heart.org/HEARTORG/General/PSA--Print--African-Americans-And-Stroke_UCM_314302_Article.jsp
Power to End Stroke
http://www.heart.org/HEARTORG/General/PSA--Print--Stroke-Early-Response1329334677658_UCM_436800_Article.jsp
Many Faces of Stroke
http://www.heart.org/HEARTORG/General/PSA--Print--There-Are-Many-Faces-Of-Stroke_UCM_314386_Article.jsp

High Blood Pressure
http://www.heart.org/HEARTORG/General/PSA--Print--High-Blood-Pressure_UCM_315045_Article.jsp

**Billboard:**
Learn the Signs of Stroke
http://www.heart.org/HEARTORG/General/PSA--Outdoor--Stroke-Early-Response_UCM_315060_Article.jsp

**Web:**
Learn the Signs of Stroke
http://www.heart.org/HEARTORG/General/PSA--Web--Stroke_UCM_315081_Article.jsp

**Cardiac Stroke Network in Washington State**
http://www.heart.org/HEARTORG/Affiliate/The-Cardiac-and-Stroke-Network_UCM_316713_Article.jsp

The Cardiac & Stroke Network is a collaboration of hospitals, emergency services providers and community stakeholders in four counties (Island, San Juan, Skagit and Snohomish Counties) who have developed streamlined processes to ensure that heart attack and stroke patients get the best coordinated care within the shortest amount of time regardless of which hospital they arrive at first. The community education and outreach program focuses on calling 9-1-1 at the first signs of a heart attack or stroke as every minute counts. Their materials are generic and available in English, Spanish, and Russian for downloading by anyone.

**Lincoln Hospital**
Lincoln Hospital has developed materials for stroke awareness, including billboards and a brochure. Anyone is welcome to use these. If you want native files or other info on Lincoln’s activities, contact Carey Guhlke at guhlkek@lhd3.org
Public and Employee Education Activities for Stroke Month

- TV PSA: http://www.heart.org/HEARTORG/General/PSA--Video--Stroke-Early-Response_UCM_315466_Article.jsp
- Radio PSA: http://www.heart.org/HEARTORG/General/PSA--Audio--Stroke_UCM_315516_Article.jsp

Play Massachusetts Department of Health's "Stroke Heroes Act FAST" in strategic locations
http://www.youtube.com/watch?v=YHzzZcXBlGk

- In-hospital stroke education outside the cafeteria
- Stickers to put on the café's plan java jackets instead of printed java jackets.
- Neuroanatomy class for non-neuro nurses with edible teaching aids (body part gummies include brains, Oriental Trading; Google gummy brains; there are even life-size gummy brains, and chocolate and jello molds).
- Java jackets
- Wear purple for stroke day
- Daily internet messages on hospitals website
- Stroke prevention health fair May 15 focusing on risks (BP, cholesterol) and stroke health awareness
- Newspaper wraps
- Stroke walk (Strength through Stroke), patient is the inspiration for this (Tacoma)
- Table tents in cafeteria
- Media outreach
- Wear purple day
- Stroke awareness ribbons
- Physician does a talk, draws 80 or so people
- TV station live feeds on stroke
- Regular talk radio spot is on stroke in May
- Putting link to YouTube NWCN PSAs on hospital website
- Might approach local media to produce their own PSA
- Info tables and presentation and introduce ECS System, signs and symptoms, and activating the system
- Presentation to the local senior center on S/S of a stroke and general stroke information
• FAST flyers in our billing statements
• Posting the posters from Cardiac and Stroke in the local pharmacies, as well as our clinic waiting rooms
• Booth where we will have our stroke information available to the public.
• In July we have a street fair that we are going to provide handouts and information for the public.

Other ideas:
• Work with your movie theatres to play stroke info before movies, maybe NWCN PSA, hand out FAST wallet cards.
• Hospitals and hospital systems often have thousands of employees so even internal promotion can reach wide audience.
• Outreach to local public health
• Area agencies on aging to reach the senior population through their vast network
• EMS councils and regions who have a role in prevention and education, although no dedicated resources for cardiac and stroke education.
RESOURCES: Patient/Community Education

American Stroke Association

- **About Stroke**
  - Stroke Warning Signs
  - Understanding Stroke Risk Factors
    http://www.strokeassociation.org/STROKEORG/AboutStroke/UnderstandingRisk/Understanding-Risk_UCM_308539_SubHomePage.jsp

- **Statistics**
  - Death Rates by State
    http://www.heart.org/idc/groups/heart-public/@wcm/@sop/@smd/documents/downloadable/ucm_319832.pdf

- **Patient Materials**
  - “Let’s Talk About Stroke” Patient Fact Sheets (including Spanish)
    http://www.strokeassociation.org/STROKEORG/AboutStroke/Lets-Talk-About-Stroke-Patient-Information-Sheets_UCM_310731_Article.jsp
  - “Answers by Heart” Patient Fact Sheets on cardiovascular conditions, treatments/tests, lifestyle & risk reduction (several languages)
    http://www.heart.org/HEARTORG/Conditions/Answers-by-Heart-Fact-Sheets_UCM_300330_Article.jsp
  - Subscribe to Stroke Connection Magazine for FREE!
    http://www.strokeassociation.org/STROKEORG/StrokeConnectionMagazine/Subscribe/Subscribe_UCM_308576_SubHomePage.jsp
  - A Guide to Help African Americans Lower Heart Disease and Stroke Risks (brochure)
  - Find a Certified Stroke Center Near You!
    http://maps.heart.org/quality/

- **Power to End Stroke**
  Education/promotional resources
  http://powertoendstroke.org/index.html
National Stroke Association

- Downloadable Fact Sheets (Stroke 101, Risk Factors, Rehab & Recovery)
  http://www.stroke.org/site/PageServer?pagename=factsheets

- Downloadable patient brochures (Stroke 101, Rehab & Recovery, Risk Factors, Prevention)
  http://www.stroke.org/site/PageServer?pagename=Brochures

National Institute of Neurological Disorders and Stroke (NINDS)

- Small quantities of free community/patient education materials, as well community education/stroke month toolkits for sale (including Spanish)
  http://ice.iqsolutions.com/ice/NINDS/strokepubs.asp

National Institute of Health

- Downloadable posters, toolkits for order (including Spanish)
  http://stroke.nih.gov/materials/toolkits.htm

- The National Heart, Lung and Blood Institute's "Act in Time" for heart attack.
  http://www.nhlbi.nih.gov/actintime/index.htm

- The Massachusetts Department of Health's "Stroke Heroes Act FAST"
  http://www.youtube.com/watch?v=YHzz2cXBIGk

Joint Commission

- “Speak Up About Stroke” brochures, posters for download (including Spanish language)
  http://www.jointcommission.org/speakup_stroke

Activase

- Free downloadable resources for patient/staff education including print materials and video resources on tPA dosing, preparation and administration, tPA mechanism of action
  http://www.activase.com

- Free downloadable resources for EMS, online education including interactive case studies
  www.EMS4STROKE.com
Concentric Medical

- Logos, graphics, animations of Merci Clot Retriever available for non-commercial use; for commercial applications contact for written permission
  www.concentric-medical.com, choose your region, and then click on Resources

Penumbra

- Images, print and video downloads for Penumbra Clot Retriever (PenumbraInc.com)
  http://penumbraInc.com/site.asp?content_id=47&category=download&menu_id=0

Covidien

- Images/animations for Solitaire clot retriever
RESOURCES: Staff Education

University of Washington CME Neurology Lecture Series

- Monthly lectures that can be attended live or viewed via webinar.
- Offerings are archived for viewing on demand
  http://www.neurology.washington.edu/seminars/neurology-lecture-series

Swedish Murdoch Stroke Series

- Archived CME webinar/lectures for on demand viewing
  http://www.swedish.org/murdockseries#Online_Modules

Activase

- Free downloadable resources for patient/staff education including print materials and video resources on tPA dosing, preparation and administration, tPA mechanism of action
  http://www.activase.com

- Free downloadable resources for EMS, online education including interactive case studies
  www.EMS4STROKE.com

Concentric Medical

- Logos, graphics, animations of Merci Clot Retriever available for non-commercial use; for commercial applications contact for written permission
  http://www.concentric-medical.com/resources/?page=resources&id=

Penumbra

- Images, print and video downloads for Penumbra Clot Retriever (Penumbrain.com)
  http://penumbrainc.com/site.asp?content_id=47&category=download&menu_id=0

Covidien

- Images/animations for Solitaire clot retriever
RESOURCES: Program Management

Department of Veterans Affairs

- Stroke Quality Improvement Toolkit. Includes Quality Management tools, order sets/pathways etc.

American Stroke Association

- Get With the Guidelines-Stroke Toolbox

- Target Stroke
  - Resources, publications, patient education, clinical tools
  - http://www.strokeassociation.org/STROKEORG/Professionals/Target-Stroke_UCM_314495_SubHomePage.jsp

Stroke Awareness Resource Center

- Stroke Month promotional tools, including print materials, videos and slides
  - http://www.stroke.org/site/PageServer?pagename=aware_eKit#tools