WMH Stroke Education 2017

The American Heart Association/American Stroke Association asks all Americans to learn two things that may save a life:

1. Know if you are at risk for stroke.

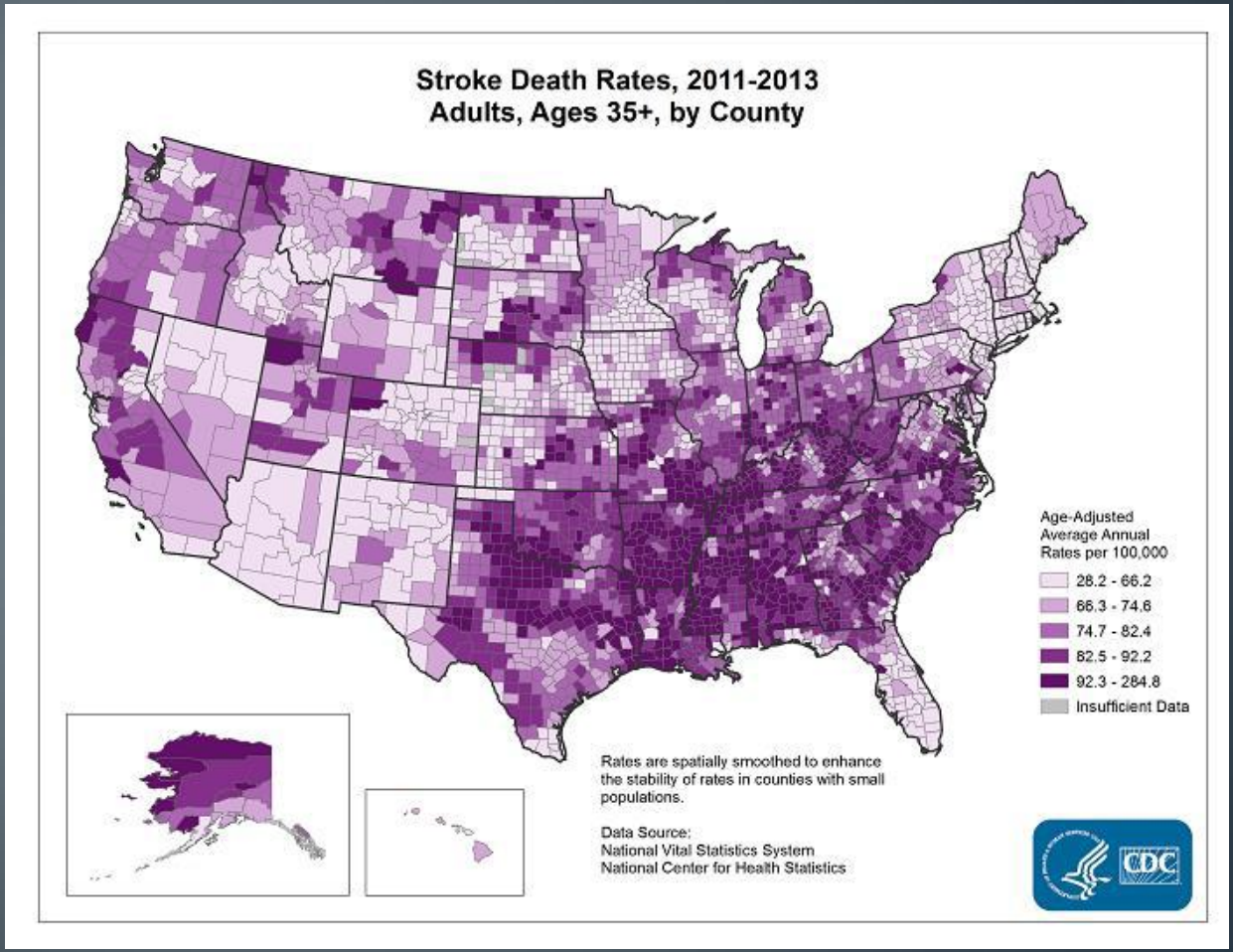
2. Know the stroke warning signs and what to do in a stroke emergency.

Stroke is…

- The 5th leading cause of death in the US, resulting in 140,000 deaths per year

- CDC, National Center for Health Statistics 2015

Statistics…


Stroke Death Rates, 2011-2013
Adults, Ages 35+, by County
Age-Adjusted
Average Annual
Rates per 100,000
28.2 - 66.2
66.3 - 74.6
74.7 - 82.4
82.5 - 92.2
92.3 - 284.8
Insufficient Data
Rates are spatially smoothed to enhance the stability of rates in counties with small populations.
Data Source:
National Vital Statistics System
National Center for Health Statistics
CDC

Statistics…

- Stroke is the leading cause of serious, long-term disability in the United States.

- Nearly three-quarters of all strokes occur in people over the age of 65. The risk of having a stroke more than doubles each decade after the age of 55.

Statistics…

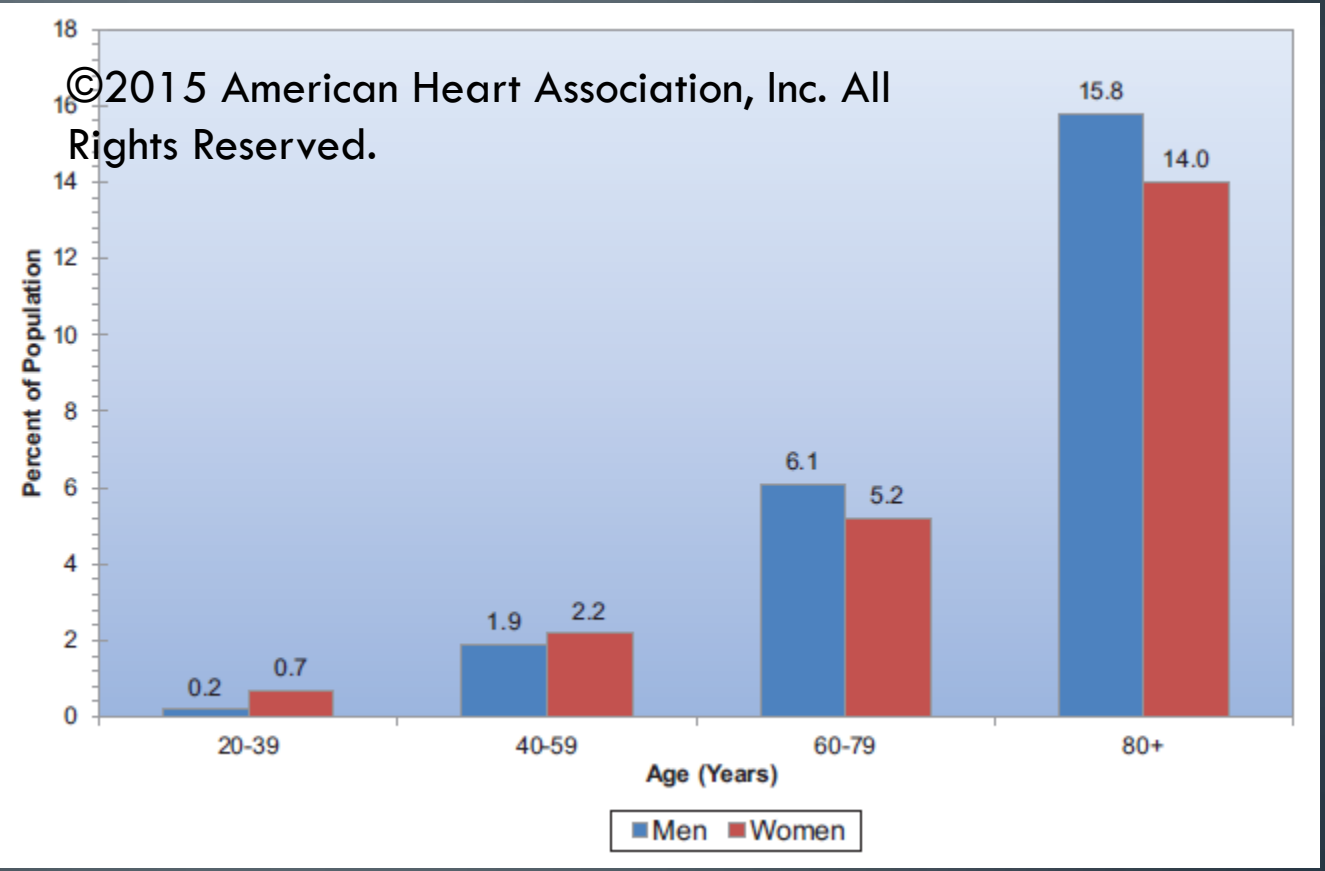
- The risk of ischemic stroke in current smokers is about double that of nonsmokers after adjustment for other risk factors.
- High blood pressure is the most important risk factor for stroke.

Statistics…

Statistics…


ONE OUT OF SIX
people will suffer
a stroke in
his or her lifetime

Prevalence of Stroke (NHANES: 2009–2012



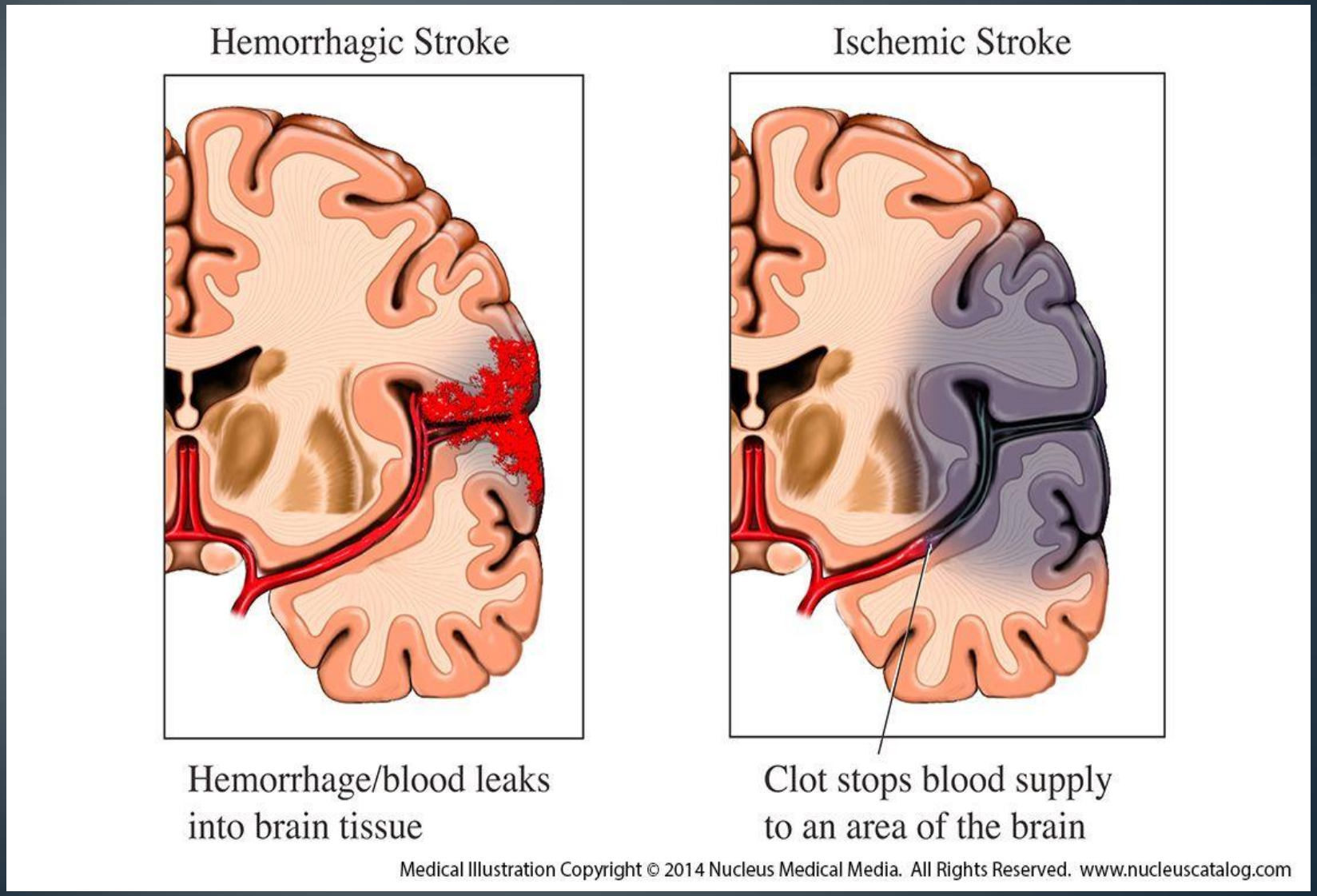
Mozaffarian D et al. Published online in *Circulation* Dec. 16, 2015

MYTHS

- **"A stroke is a type of heart attack or seizure"**

A stroke is a disease of the vessels in the brain. Sometimes a person can have a seizure after having a stroke. Strokes and heart disease are closely related, but are not the same.

Types of Strokes:



Ischemic Strokes

An ***Ischemic Stroke*** occurs when a clot or a mass clogs a blood vessel, cutting off the blood flow to brain cells. The underlying condition for this type of obstruction is the development of fatty deposits lining the vessel walls. This condition is called *atherosclerosis*.

A ***Hemorrhagic Stroke*** is a ruptured vessel in or around the brain that causes bleeding and often causes increased pressures in the brain.

Ischemic Strokes

To view images, right click on this hyperlink and click "open hyperlink"

http://watchlearnlive.heart.org/CVML_Player.php?moduleSelect=iscstr

Ischemic Strokes

account for about

87%

of all cases

Hemorrhagic Strokes

account for about

13 %

of stroke cases

Hemorrhagic Strokes

Are caused by a weakened vessel that ruptures and bleed into, or around, the brain

To view images, right click on this hyperlink and click "open hyperlink"

watchlearnlive.heart.org/CVML_Player.php?moduleSelect=hemstr

Hemorrhagic Strokes

- Can include:
  - Intracerebral hemorrhage
  - Subarachnoid Hemorrhage
  - Aneurysm

MYTHS

- **"There are warning signs to a stroke"**

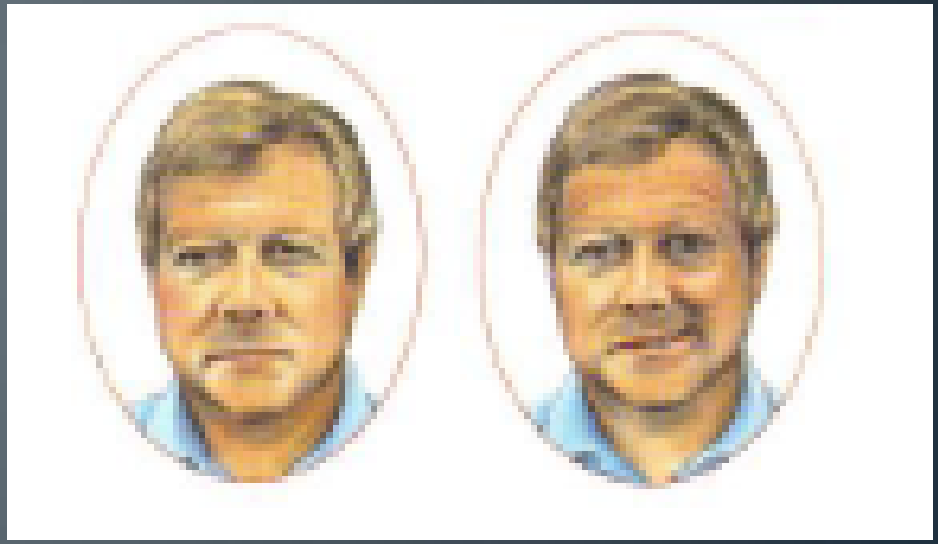
A person can have a stroke without showing any warning signs. The stroke happens over seconds to minutes. Some people do have TIA's, or mini-strokes, which may precede a larger stroke event.

Common Stroke Warning Signs and Symptoms

- *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.

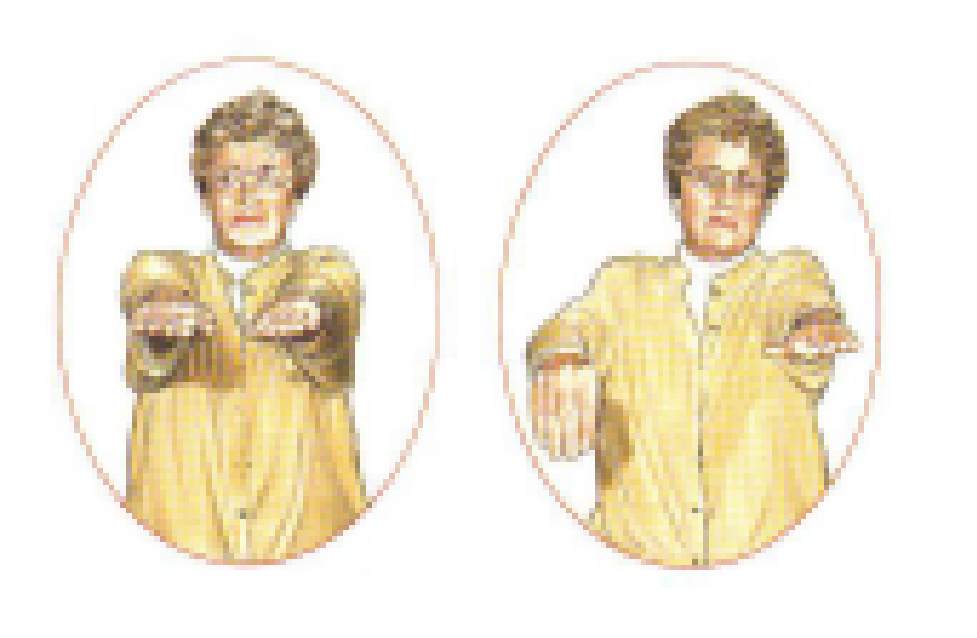
Cincinnati Prehospital Stroke Scale

- 1: Facial Droop



Cincinnati Prehospital Stroke Scale

- 2: Arm Drift



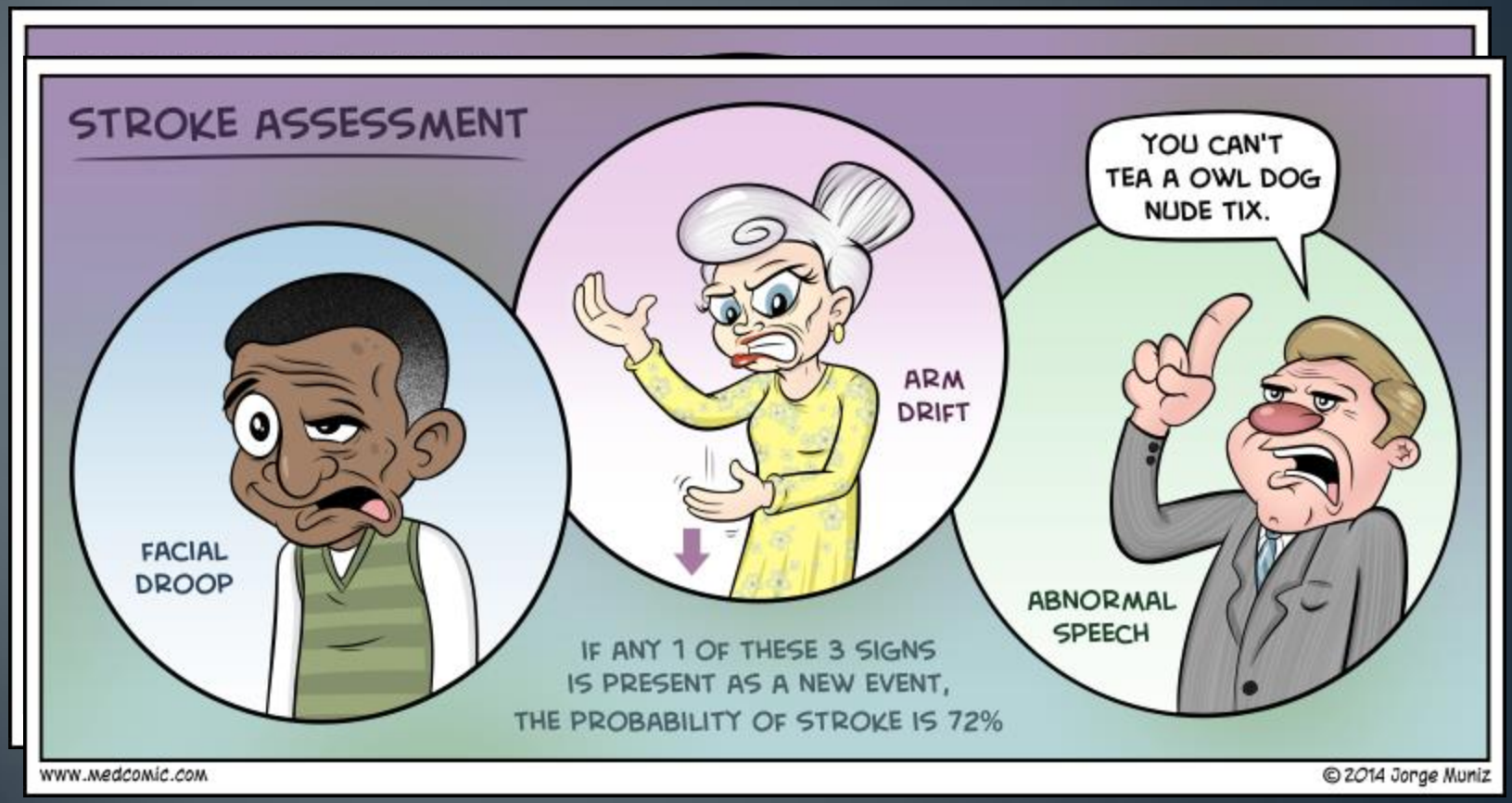
Cincinnati Prehospital Stroke Scale

3: Abnormal Speech

Have the person say:

"you can't teach an old dog new tricks".

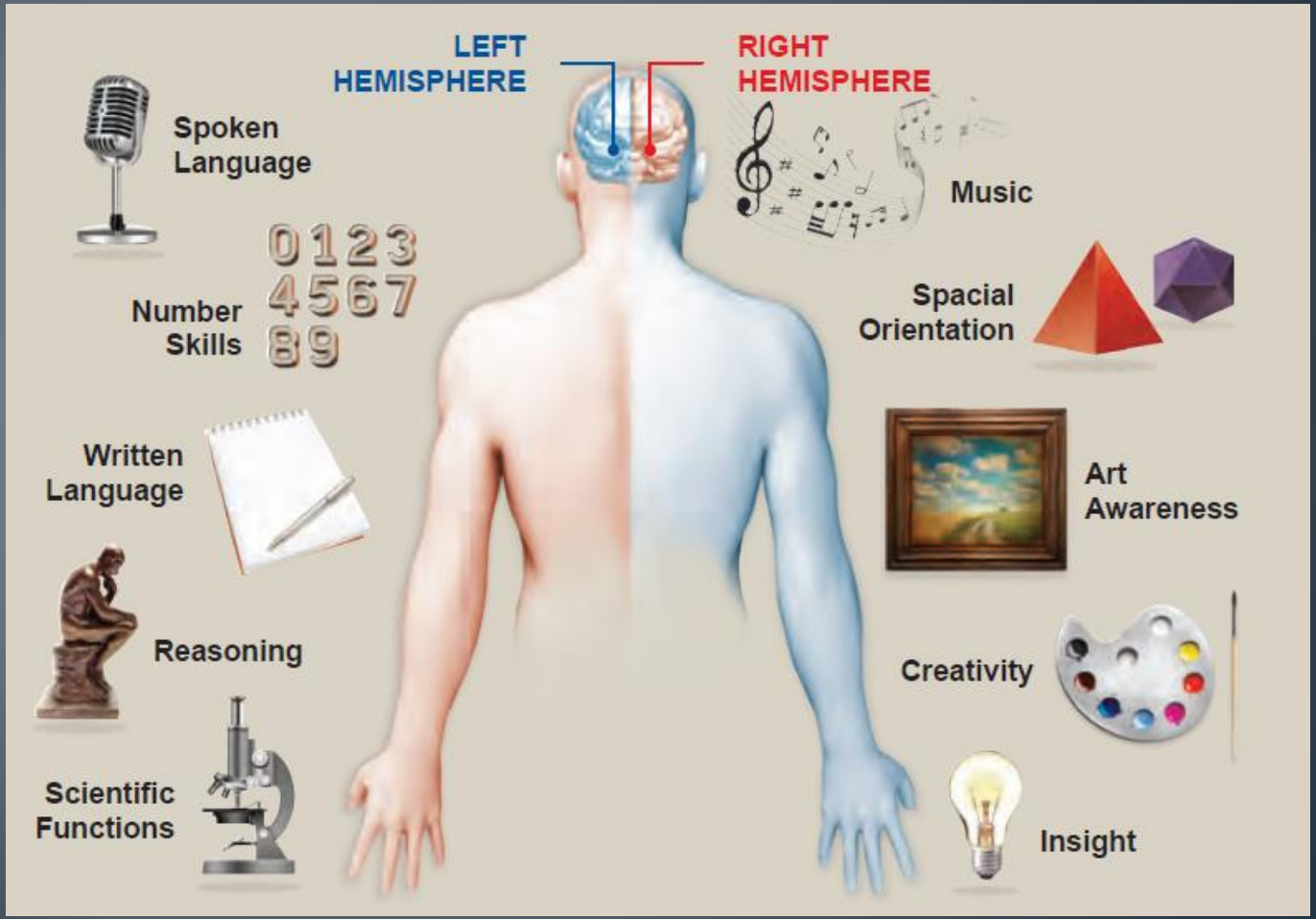
Cincinnati Prehospital Stroke Scale



Cincinnati Prehospital Stroke Scale

If any 1 of the 3 signs is abnormal, the probability of a stroke is 72%

How a Stroke can affect someone

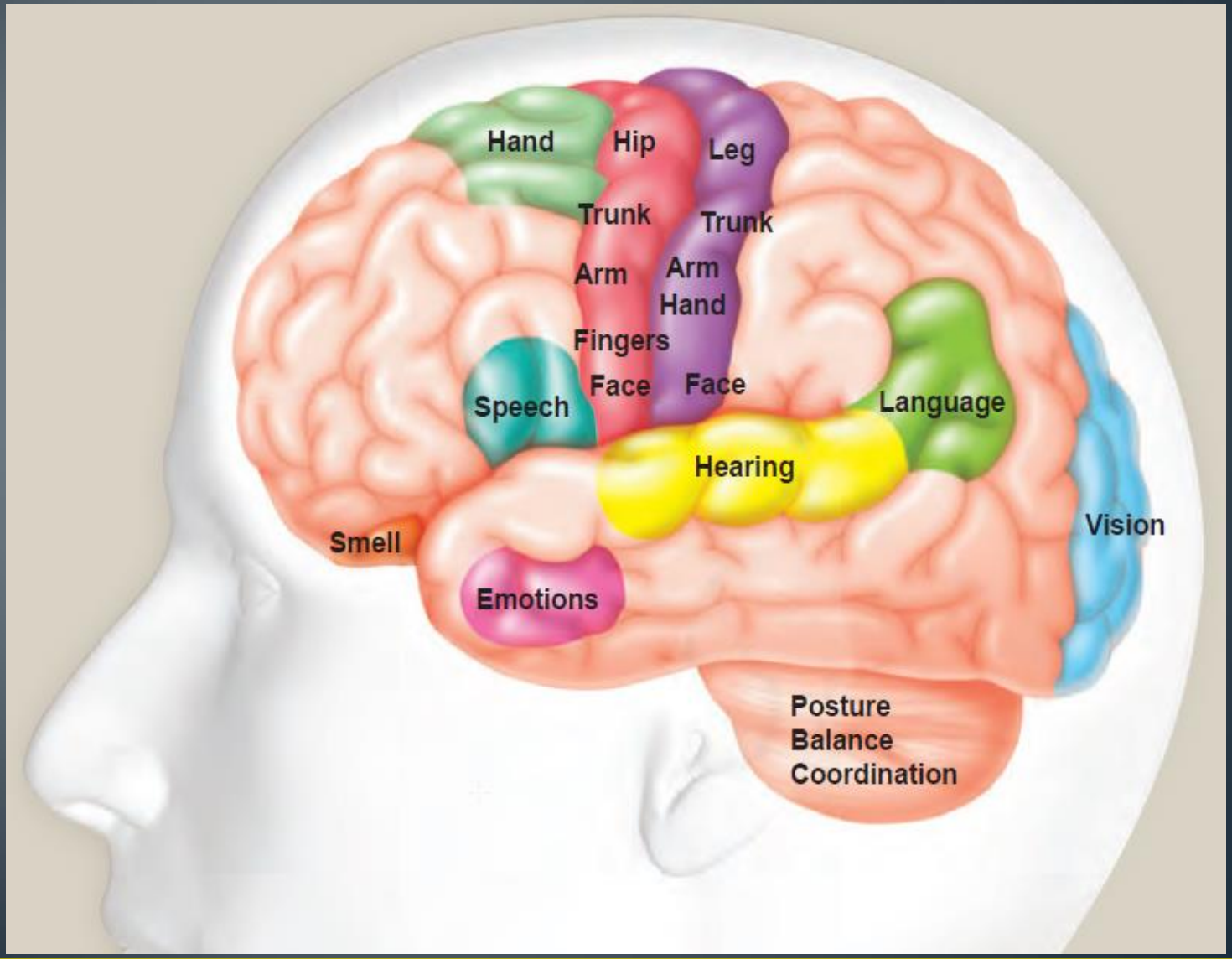


How a Stroke can affect someone

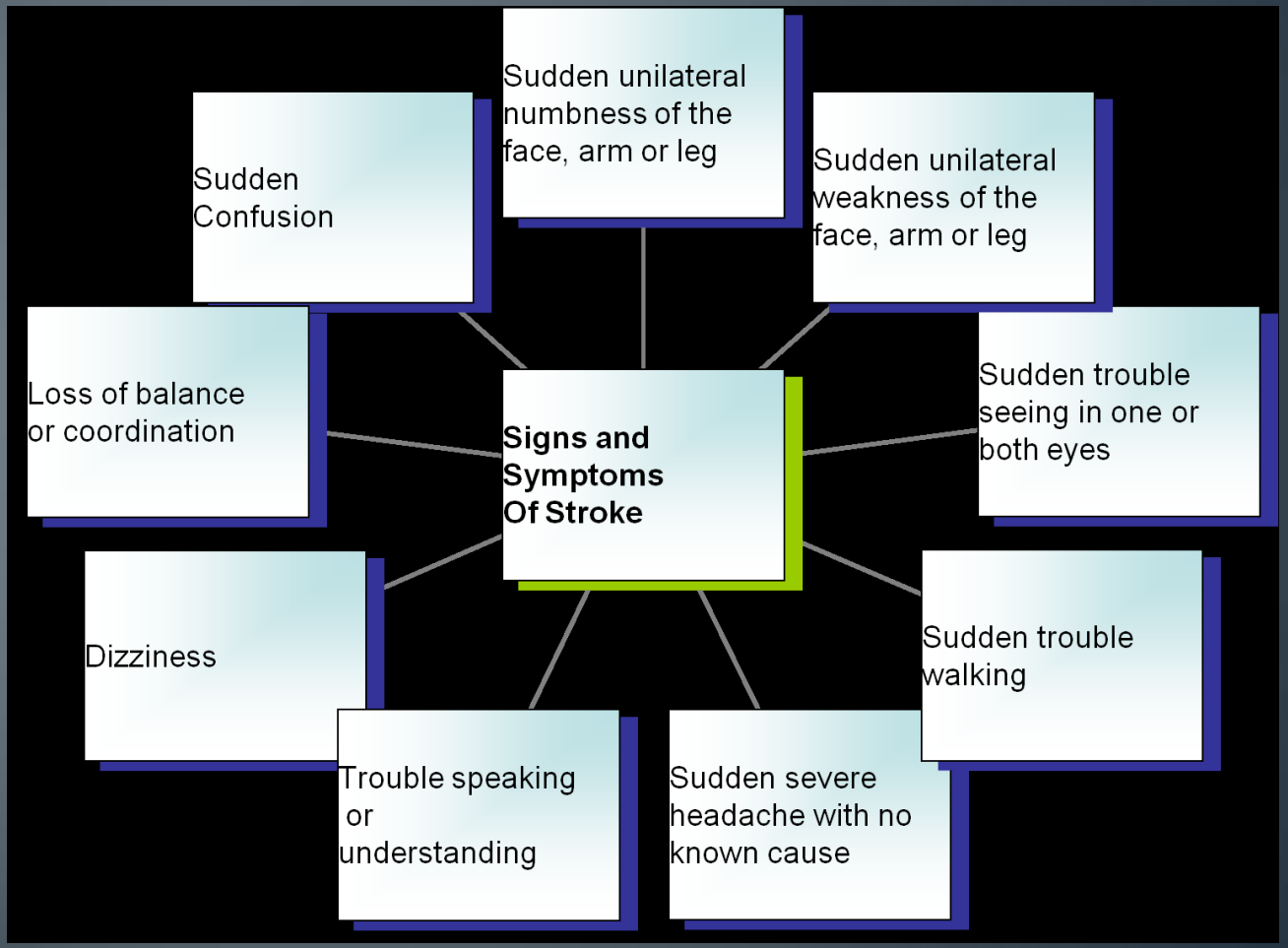
- A stroke on the Left side of the brain can cause right sided weakness or paralysis, can affect ability to understand what is read or heard, or trouble figuring out math or science problems.

- A stroke on the Right side of the brain can cause weakness or paralysis on the left, can affect creativity, or can affect ability to recognize emotions or find your way around.

How a Stroke can affect someone



Rule Out Stroke Patient



TIA

Transient Ischemic Attack:

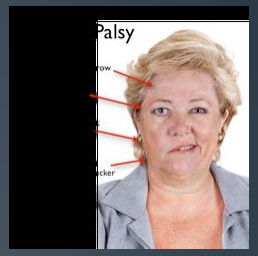
Stroke symptoms occur, and resolve within one hour.

Treat with the same urgency as an actual stroke.

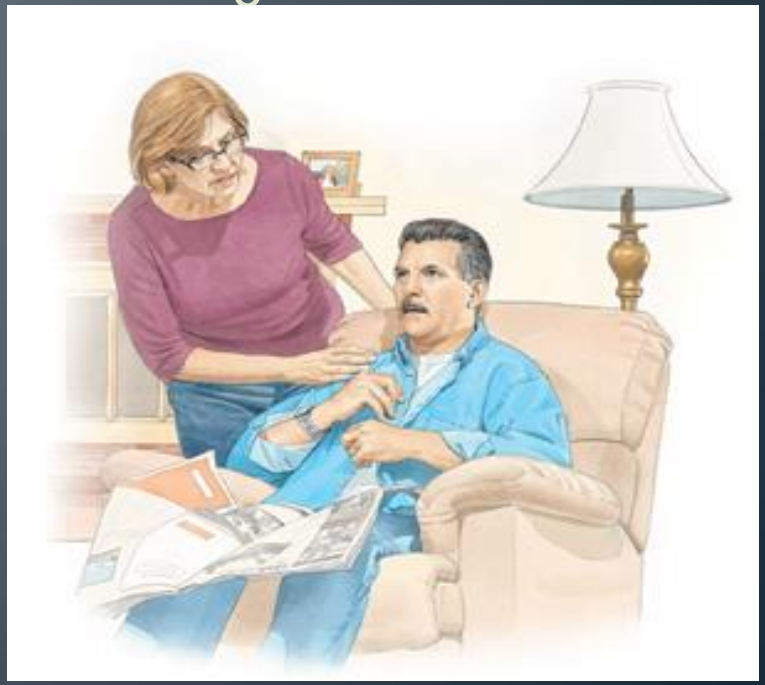
Conditions that Mimic a Stroke

Hypoglycemia

Bell's Palsy



Unrecognized seizures



Intoxication

Risk Factors for Stroke

Unchangeable Risk Factors

- Age: The chance of having a stroke approximately doubles for each decade of life after age 55.
- Heredity: Your stroke risk may be greater if a parent, grandparent, sister or brother has had a stroke
- Race: African-Americans have higher risk
- Sex: Each year, women have more strokes than men
- Prior Stroke

MYTHS

- "Only old people have strokes"

  Strokes can, and do, happen in young people too… but regardless of age, the signs are the same. Younger people tend to ignore the symptoms!

- "Women are protected from Strokes"

  Women suffer strokes more often than men, but then again, a woman's life expectancy is longer…

Changeable Risk Factors

- High Blood Pressure is the leading cause of stroke! Keep it less than 140/90
- Smoking damages vessels! It doubles the risk!
- Diabetes – get the sugars down!!
- Vessel disease: carotid or peripheral
- Atrial Fibrillation causes blood clots to develop in the heart, and travel to the brain.
- Obesity – increase physical activity!
- High Cholesterol! Keep it less than 200.

REMEMBER

Time Lost Is Brain Lost

When a Stroke Occurs: Quick Stroke Treatment Can Save Lives!

Stroke –
there's treatment if you act FAST.

Face
Face look uneven?

Arm
One arm hanging down?

Speech
Slurred speech?

Time
Call 911 NOW!

What Is A "Stroke Alert"?

- A *stroke alert* is activated anytime a patient with signs or symptoms of stroke/TIA presents to Wayne Memorial within **6 hours** of symptom onset.

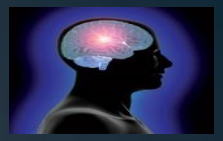
WAYNE MEMORIAL STROKE TEAM

- **Stroke Alert** activation allows members of the **Stroke** team to quickly mobilize to the E.D. so that treatment of the acute stroke patient can begin as soon as possible.
- The patient is taken *directly* to the CT scanner.
- Once the scan is completed, the patient is taken to his/her ED room where their workup is continued.

Identification and Mobilization It takes a TEAM!

- Prehospital Providers
- •
- EMS (Paramedicis)
- •
- Emergency Room Physician
- •
- Nurses (ED, ICU and PCU)
- •
- Radiology/CT Technicians
- •
- Laboratory Technician
- •
- Respiratory Technician
- •
- Cardiology Technician
- •
- ED Technicians
- •
- Registration Staff
- •
- Telemedicine Physician or
- •
- Neurology Physician

STROKE ALERT!



What is your role?

Purpose

♥ to ***quickly*** identify and treat patients with new signs and symptoms of stroke

♥ to identify acute ischemic stroke patients who may be candidates for t-PA (clot buster) or mechanical clot removal

Call a Stroke Alert if your patient shows any of these signs and symptoms:

SUDDEN onset of numbness or weakness of the face, arm, or leg (especially on one side of the body)

SUDDEN confusion, trouble speaking or understanding language

SUDDEN trouble seeing in one or both eyes

SUDDEN trouble walking, dizziness, loss of balance or coordination

SUDDEN and severe headache with no known cause

- **Dial 5555* to call a Stroke Alert**
- **Report: "Stroke Alert"**
- **State: Location**

What happens to my patient when I call a Rapid Response/Stroke Alert?

♥ **Bedside assessment**
♥ **To CT**
♥ **To ED**

What you need to know when the Rapid Response/Stroke Alert team arrives:

When patient was **last seen in the normal state**

Finger stick glucose results

Medical/Surgical History and **pertinent** admission information /any surgeries

Current medications

Time Goals

Lab Draw before going to CT – results are needed within 45 min

To CT within 20 min from announcement of Stroke Alert: results are needed within 45 mins

T-PA, if eligible, < 1 hour door to needle

Person who called the Rapid response/ Stroke Alert	Stay in the room and be available to answer questions
CNA	Bring the following items into the room: Blood glucose monitor, COW, Vital Sign Machine, Rapid Response Records, IV supplies and any other required forms.
Patient's Nurse	• Obtain blood glucose level, • Obtain vital signs, • Be aware of changes in patient, • Be prepared to give information to Rapid Response Nurse
Clinical Coordinator	Call Hospitalist to notify of Rapid response and Stroke alert, transport to ED (to CT) Accompany patient to CT Scanner
ED Nurse	Perform NIHSS & Dysphagia Screen
Rapid Response Nurse	• Speak with the person who called the "Rapid Response" - Stroke alert • Find out when patient "last seen normal" • Find out what prompted the call • Notify ED physician & give report of the situation • ED physician to complete NIHSS and order SUPERSTAT CT & transport the patient to the ED to await results from Radiology • **ED TECH** enter Super STAT STROKE ORDER SET • Complete Rapid Response Record • Take patient t dire4ctlt to CT, allow Lab technician, if present, to draw blood before leaving, take patient's' information/records with you • After CT take patient to ED •Shift supervisor /bed placement of potential change or transfer

Time Lost Is Brain Lost

- Remember that there is only a **3 hour window** from the time of symptom onset during which IV tPA (clot buster) may be considered to be administered.
- •The window for Interventional therapy is **less than or equal to eight hours** from symptom onset.
- **•When obtaining information from family members, ask "when was the last time the patient was seen NORMAL?"**

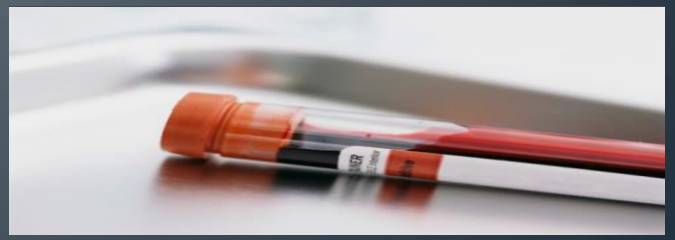
ASK:

When was the person LAST KNOWN TO BE NORMAL???

What Is My Role In A Stroke Alert?

- Recognize the signs and symptoms of acute stroke
- Assist in getting the initial imaging study completed in a timely fashion (45 minutes)
- Draw the blood for the ordered lab work as quickly as possible (use the button in the room to call for assistance if you need additional help in getting blood drawn quickly) and document the time blood is drawn

  (completed 45minutes)



Stroke Treatment: tPA

Once it has been determined that the person is having an ISCHEMIC STROKE, care providers can administer tPA, via intravenous, to dissolve the clot and improve blood flow to the brain.

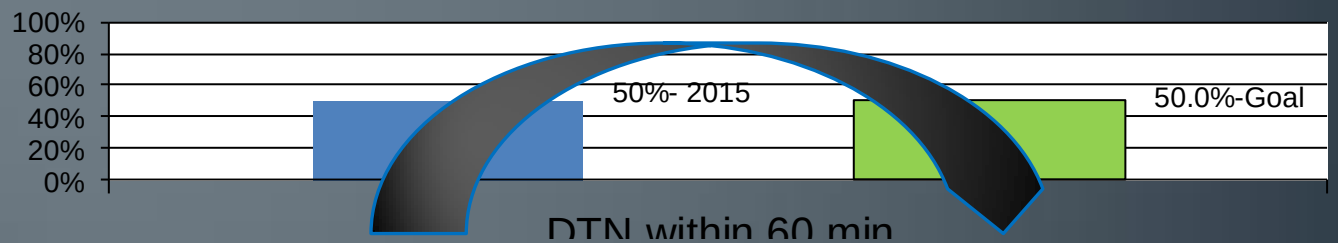
STROKE CARE
American Heart Association

- www.targetstroke.org

THE BETTER OUR TIMES
THE BETTER OUR STROKE
PATIENTS CHANCES OF
FULL RECOVERY

Stroke The Time Is Now

DOOR -TO –Needle (DTN)-IV tPA (ACTIVASE) 60 MINUTES



Stroke Treatment: tPA

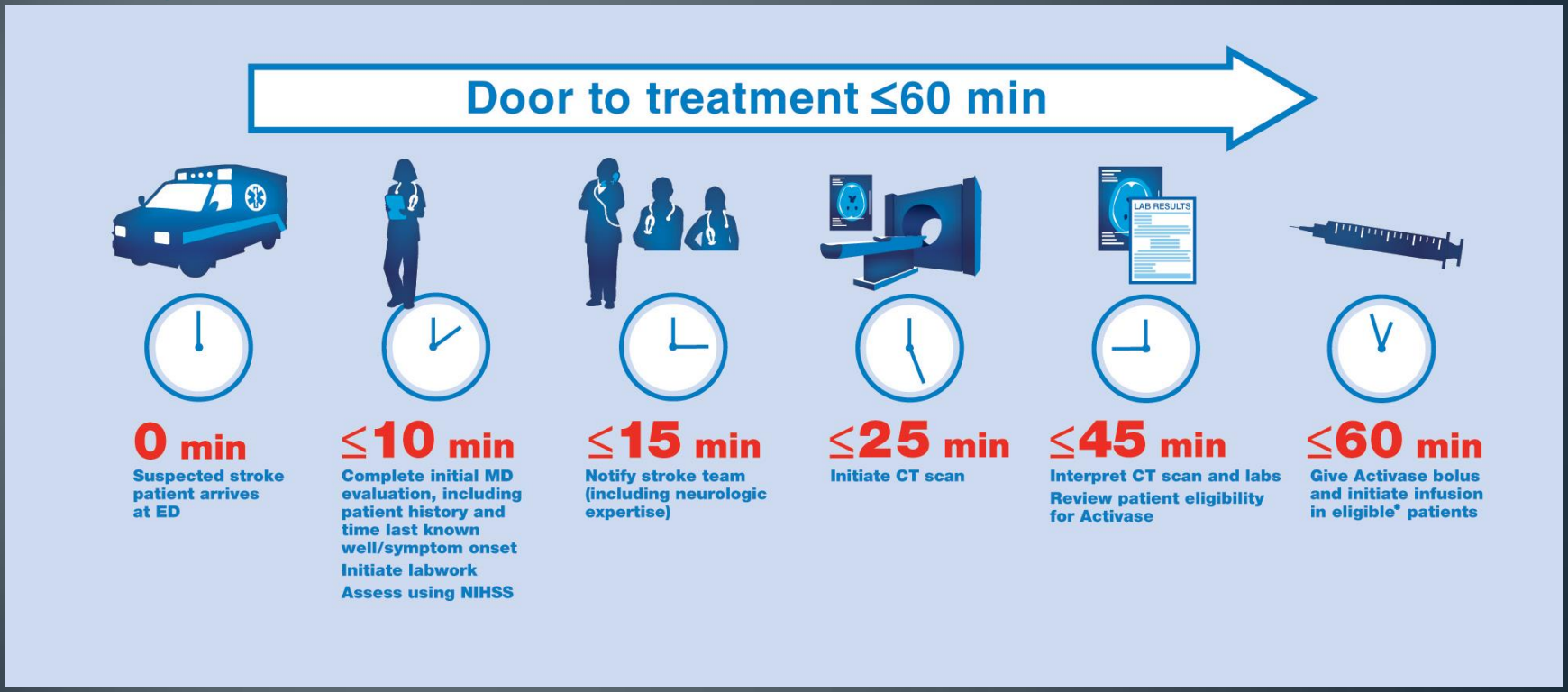
IF the tPA can be administered within 3 hours of the onset of the stroke, it may improve the chances of recovery.

Time is Brain

=

Stroke Onset to IV TPA ≤ 3 hours or ≤ 4.5 hours

STROKE TIME QUALITY MEASURES



http://www.heart.org/HEARTORG/HealthcareResearch/GetWithTheGuidelinesHFStroke/Get-With-The-Guidelines-Stroke-Home-Page_UCM_306098_SubHomePage.jsp

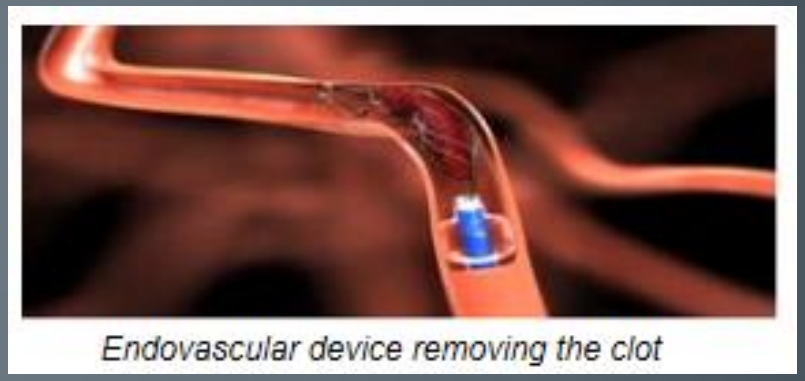
www. activase.com

STROKE CORE MEASURE SET

- **STK 1**
- **Venous Thromboembolism (VTE)**
- STK 2
- Discharge Antithrombotic Therapy
- STK3
- Anticoagulation Therapy A.Fib/Flutter
- STK4
- Thrombolytic Therapy
- STK5
- Antithrombotic Therapy by end of Hospital Day 2
- STK6
- Discharge on Statin Medication
- STK8
- Stroke Education
- STK10
- Assess for Rehabilitation
- *CMS-Centers for Medicare and Medicaid: IQR= Inpatient Quality Reporting

Other Stroke Treatments

- Endovasular procedures/thrombectomy which requires a physician to use a catheter in the vessel to remove the blood clot



Endovascular device removing the clot

- Surgery, which is an option for hemorrhagic stokes, to stop bleeding

Stroke Treatment

Prevention!

80% of strokes are preventable!

Manage Risk Factors:

Control blood pressure

Quit smoking

Manage weight

Exercise

MYTHS

- "There is nothing you can do to prevent a stroke"

  Yes you can!! Manage blood pressure, diabetes, cholesterol, and weight!!

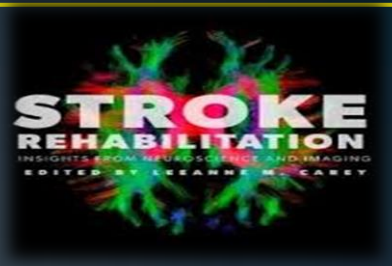
- "You can treat a stroke at home by taking aspirin"

  Aspirin may be helpful for someone having a heart attack, but if the stroke is a hemorrhagic stroke, aspirin could cause more problems. The best thing to do is get to the ER fast!!

According to the National Stroke Association:

- 10% of survivors recover almost completely
- 25% recover with minor impairments
- 40% experience moderate to sever impairments
- 10% require long term care
- 15% die shortly after
- ~14% experience a second stroke within the first year following a stroke

Rehabilitation



Services of the Stroke Management Team shall be made available to any patient following a stroke. The services shall be provided without discrimination because of race, color, age, religion, handicap, national origin, or ancestry, or any other basis whatsoever.

PURPOSE

The purpose of formulating a Stroke Management Team was for better coordination of existing rehabilitation services and improvement in services to the patient.

Referral, following stroke, will be simplified. Only one Stroke Rehab referral, by the physician, will be needed in order to contact the three therapies.

The patient will benefit by receiving immediate attention for rehabilitation. A concentrated effort by the Stroke Management Team will give to the patient the maximal opportunity for improvement.

GOALS

1. To increase independence of each patient following a C.V.A.
2. To facilitate each patient's maximum abilities and prevent abnormal development and further disability.
3. To obtain optimum incorporation of each patient into family and community life or any discharge setting, such that he/she can be a contributing and participating member of same.
4. To implement treatment programs for each patient.

CRITERIA for Referral

- When patient is admitted with diagnosis of Acute CVA, Stroke Rehabilitation Assessment will not be scheduled until 24 hours of admission has passed. All therapy referrals will be initiated by the physician.
- If patient has not stabilized within 24 hours of admission, the assessment will be postponed another 24 hours.
- If the patient remains unstable, the staff will consult with nursing and patient's referring physician to make a decision about proceeding with the evaluation. The results of the discussion will be documented.

TREATMENT PLAN

- Stroke Rehabilitation Team, under the guidance of the patient's physician, will develop a treatment plan.
- The treatment plan is individualized according to the patient's assessment results and expected prognosis, the goals of the patient and/or family, and the program plans of each therapist.
- Long term goals and short term goals will be developed and documented in the medical record.
- The patients' rehabilitation potential will be documented in the EMR by each therapist.
- Methods of treatment will be documented in the medical record.

Stroke

JOURNAL OF THE AMERICAN HEART ASSOCIATION

American Stroke Association℠

A Division of American Heart Association

Recommendations for the Establishment of Stroke Systems of Care: Recommendations From the American Stroke Association's Task Force on the Development of Stroke Systems

Task Force Members, Lee H. Schwamm, Arthur Pancioli, Joe E. Acker, III, Larry B. Goldstein, Richard D. Zorowitz, Timothy J. Shephard, Peter Moyer, Mark Gorman, S. Claiborne Johnston, Pamela W. Duncan, Phil Gorelick, Jeffery Frank, Steven K. Stranne, Renee Smith, William Federspiel, Katie B. Horton, Ellen Magnis and Robert J. Adams

Stroke 2005;36;690-703; originally published online Feb 2, 2005;
DOI: 10.1161/01.STR.0000158165.42884.4F
Stroke is published by the American Heart Association. 7272 Greenville Avenue, Dallas, TX 72514
 Print ISSN: 0039-2499. Online ISSN: 1524-4628

DNV

DNV·GL
BUSINESS ASSURANCE