

# Washington State Emergency Cardiac and Stroke System

# Saving TIME Saves LIVES

New System Launches in 2011

Many people in Washington die or are disabled from heart attack, cardiac arrest, and stroke because they do not get lifesaving treatment.

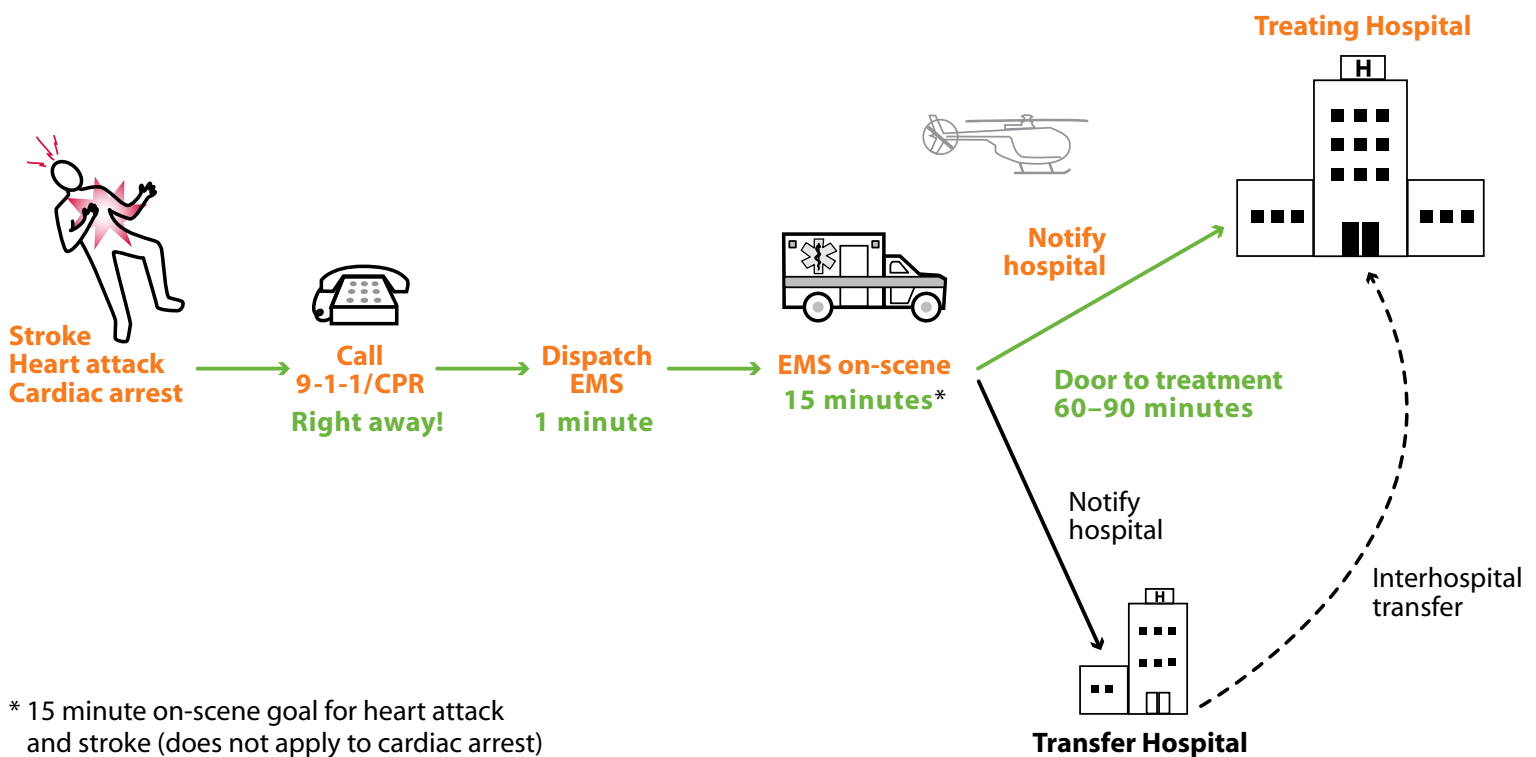
Timely treatment can mean the difference between returning to work or becoming permanently disabled, living at home or living in a nursing home. It can be the difference between life or death.

To improve outcomes for thousands of people, we're changing the way emergency medical services triage cardiac and stroke patients. A new law creates the Washington State Emergency Cardiac and Stroke System. With emergency medical services and hospitals working together, we can make a real difference in people's lives.

## Getting the right patient to the right place in time

### GOAL:

Symptom onset to treatment = less than 120 minutes





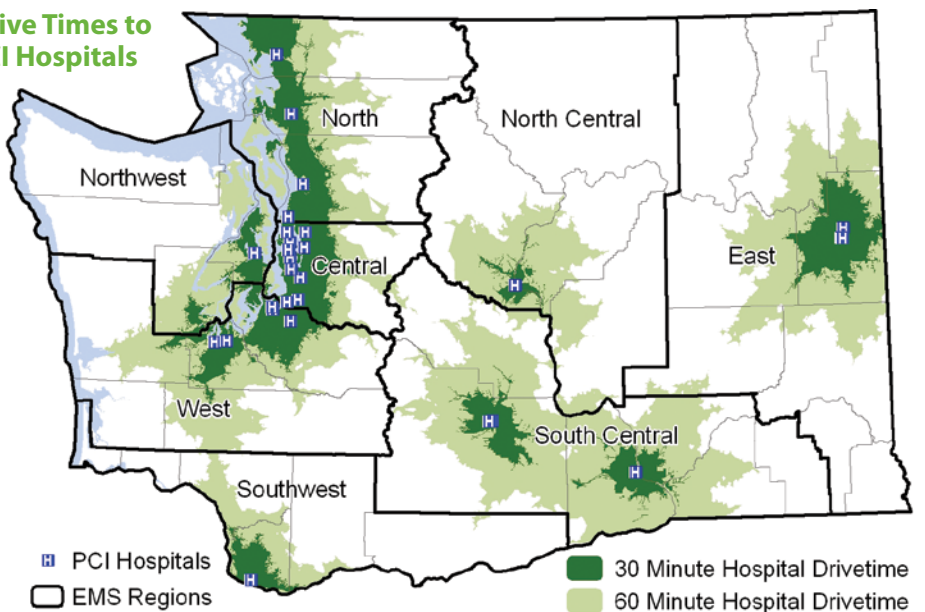
## THE PROBLEM: Too many people become disabled or die because they don't get treatment in time

- Most strokes (80 percent) are caused by clots. In 2008, only 4 percent of this type of stroke were given the best treatment – the clot-busting drug tPA.
- Primary percutaneous coronary intervention (PCI) is the most effective treatment for heart attack. PCI includes angioplasty (balloon) and stenting. Less than half of all people who have a heart attack get PCI.
- Access to resources for diagnosing and treating heart attacks and strokes varies, especially in rural areas.
- Often people having a heart attack or stroke are transported to the nearest hospital, only to be transferred to another hospital for treatment.

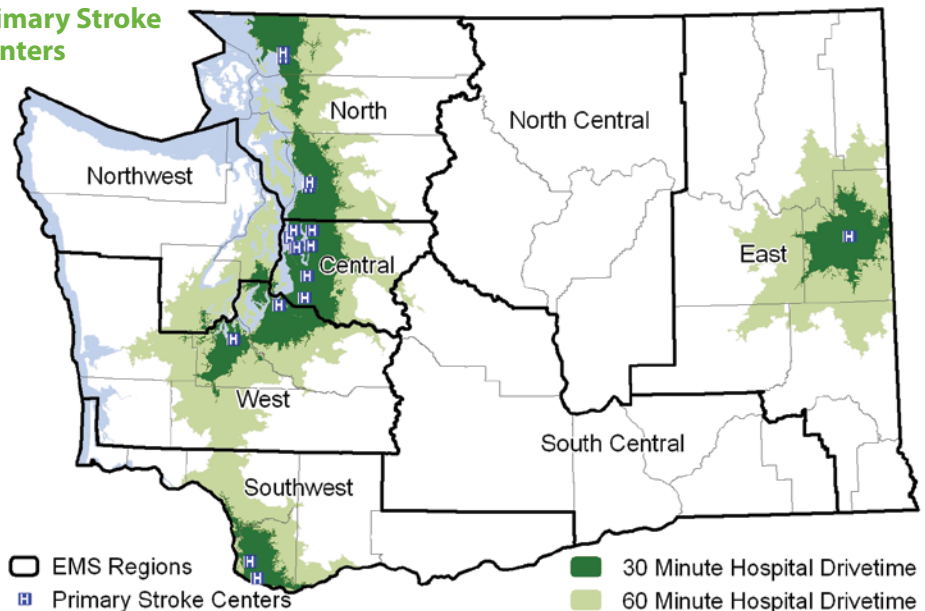
These maps tell part of the story – there are vast areas of the state where the treatments with the best outcomes are not available within an hour's drive, especially for stroke. We need to fill in these gaps, and we need to get patients directly to hospitals that can treat them.

**The new system will identify hospitals able to treat, and will put prehospital procedures in place to get patients to those hospitals. This will significantly reduce time to treatment and improve outcomes, meaning fewer deaths and less disability.**

### Drive Times to PCI Hospitals



### Drive Times to Primary Stroke Centers



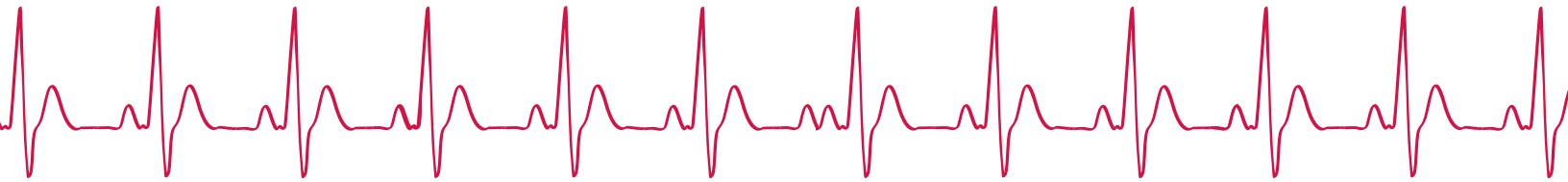
## THE SOLUTION: A system built for speed and quality

Recognizing that we can do a better job at emergency cardiac and stroke care, the Legislature passed a new law (SSHB 2396) creating an emergency cardiac and stroke system. The Department of Health will:

- Adopt standard procedures for emergency medical services to assess and triage cardiac and stroke patients.
- Identify hospitals that can treat cardiac and stroke patients and meet criteria to participate in the system.
- Require quality improvement activities for participating hospitals.
- Expand the scope of EMS and Trauma regional quality assurance programs to include cardiac and stroke cases.

### Timeline

November 2010	Send applications to hospitals
January 2011	Hospital applications due
April 2011	Publish first list of participating hospitals Second open application period begins
May 2011	Prehospital protocols and procedures updated Training for EMS personnel in process
July 2011	Publish second list of participating hospitals System phase-in begins



### System basics

#### Prehospital:

- Rapid dispatch: *advanced life support for cardiac patients where available, fastest transport for stroke*
- Standardized EMS protocols: *F.A.S.T.\**, 12-lead ECG, CPR, defibrillation
- Pre-arrival notification to destination hospital
- Data collection and quality improvement activities
- Public education: *signs and symptoms, CPR, call 9-1-1*

#### Hospital:

- Cardiac/stroke teams
- Pre-arrival activation of cardiac/stroke team, cath lab (one-call activation recommended)
- Standardized protocols (order sets)
- Patient cooling (therapeutic hypothermia) for cardiac arrest
- Patient outcomes data to EMS and first hospital where applicable
- Data collection and quality improvement activities
- Patient/public education: *prevention, signs and symptoms, call 9-1-1*

\*The Cincinnati Stroke Scale tests facial droop, arm drift, and speech for signs that a person is having a stroke. An easy-to-remember acronym for the scale is F.A.S.T.: Face-Arms-Speech-Time last normal.



## For more information

Heart Disease & Stroke Prevention Program  
Washington State Department of Health  
Phone: 360-236-3695

## System partners

A statewide partnership designed the new system:

- Washington State Department of Health
- The Governor's EMS and Trauma Steering Committee
- Emergency Cardiac & Stroke Technical Advisory Committee
- American Heart Association/American Stroke Association
- 9-1-1 agencies
- emergency medical services
- hospitals
- clinicians (neurologists, cardiologists, emergency physicians, nurses)
- Washington State Hospital Association
- Rural Health Care Quality Network
- American College of Cardiologists
- American College of Emergency Physicians

## System goals

The new system will help prevent deaths, disability, and nursing home placements due to heart attack, stroke, and cardiac arrest.

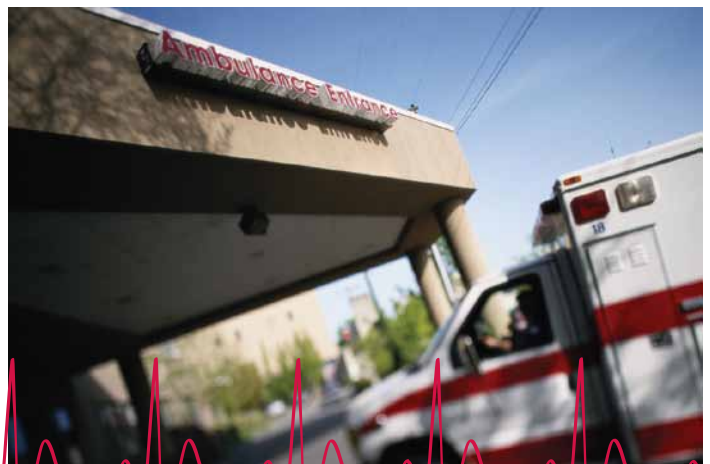
- 120 minutes symptom onset to treatment
  - 15 minutes EMS on-scene – heart attack and stroke
  - 30 minutes door-to-needle – heart attack
  - 60-90 minutes door-to-balloon – heart attack
  - 60 minutes door-to-tPA – stroke
  - 90 minutes first medical contact to treatment
- Set cardiac arrest goals
- Participating hospital one hour from every citizen
- Increase percentage of cardiac/stroke patients who arrive by EMS
- Increase percentage of patients EMS notified hospital pre-arrival

## Resources

Emergency Cardiac and Stroke System information:  
[www.doh.wa.gov/hsqa/hdsp/default.htm](http://www.doh.wa.gov/hsqa/hdsp/default.htm)

Washington State Stroke Forum (stroke care resources for hospitals and emergency medical services):  
<http://strokeforum.doh.wa.gov>

For persons with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TTY/TDD 1-800-833-6388).



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**Health**  
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