



A SUMMARY OF **Primary Stroke Center Policy** IN THE UNITED STATES

- OVERVIEW OF NATIONWIDE STROKE POLICIES
- CDC FUNDING SNAPSHOT
- AT-A-GLANCE STATE SUMMARIES

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A SUMMARY OF PRIMARY STROKE CENTER POLICY IN THE UNITED STATES

Introduction

Stroke is a leading cause of death in the United States.¹ Much is known about how to treat stroke victims swiftly and effectively, yet the accessibility of health care facilities with the resources and processes to care for acute stroke patients varies from state to state. Research^{2,3} indicates that patients receiving care at primary stroke centers⁴ have a higher incidence of survival and recovery than those treated in hospitals without this type of specialized care. In 2008, the Centers for Disease Control and Prevention (CDC) partnered with the National Association of Chronic Disease Directors and the University of Georgia's Department of Public Administration and Policy to assess the extent of and variation in implementation of state policy related to primary stroke centers in the United States. The first step in this assessment process was to conduct a review of policies in all 50 states and the District of Columbia. CDC updated the review in July 2010.

This summary provides a snapshot of laws and regulations related to primary stroke centers in the United States through mid-2010. It includes a summary and synthesis of policy action across states as well as an individual report for each state.

Burden of Stroke

About 795,000 American adults have a first or recurrent stroke each year. Almost 136,000 Americans of all ages died of a stroke in 2007.¹ According to the American Heart Association/American Stroke Association (AHA/ASA), the estimated direct and indirect cost of stroke to the United States for 2010 was \$53.9 billion⁵:

- Direct financial cost for care: \$28.3 billion.
- Indirect cost (measured in lost productivity): \$25.6 billion.

Although new treatment strategies and medications have improved stroke care in the last two decades, many people with stroke symptoms do not receive the recommended treatment early enough.

Challenges include:

- Low public awareness about stroke, its symptoms, and treatments.
- Prolonged stroke victim transport times, especially in rural areas, leading to delayed assessment of symptoms.

¹ Xu, J, Kochanek KD, Murphy SL, Tejada-Vera B. Deaths: final data for 2007. *Nat Vital Stat Rep*. 2010;58(19).

² Gropen TI, Gagliano PJ, Blake CA, Sacco RL, Kwiatkowski T, Richmond NJ, et al. Quality improvement in acute stroke: the New York State Stroke Center Designation Project. *Neurology*. 2006;67(1):88-93.

³ Douglas VC, Tong DC, Gillum LA, Zhao S, Brass LM, Dostal J, et al. Do the Brain Attack Coalition's criteria for stroke centers improve care for ischemic stroke? *Neurology*. 2005;64(3):422-7.

⁴ A primary stroke center is defined as a hospital-based center with the resources and processes to care for acute stroke patients. A primary stroke center is certified as such by The Joint Commission, is recognized through state-level policy standards, or both.

⁵ Heidenreich PA, Trogon JG, Khavjou OA, Butler J, Dracup K, Ezekowitz MD, et al. Forecasting the future of cardiovascular disease in the United States: a policy statement from the American Heart Association. *Circulation*. 2011;123:933-44.

- Low use of intravenously administered tissue plasminogen activator (tPA), a clot-busting drug that is the only Food and Drug Administration (FDA)-approved medical treatment for acute ischemic stroke. Use of intravenous tPA is somewhat limited due to hospitals' lack of infrastructure to administer the drug within its FDA-approved three-hour window of efficacy. Scarce resources can hamper first responders' capacity to get the stroke victim to a tPA-administering facility rapidly, which compounds this challenge.
- Limited access to resources, including neurological specialists, in some geographic areas.

Policy Changes to Improve Stroke Care

CDC's Division for Heart Disease and Stroke Prevention provides funding for states to implement policy and systems changes that will improve cardiovascular health. "Policy" is often defined as a government decision to proceed with or stop some pattern of action. The most obvious policies are laws, regulations, executive orders, or administrative rules. State health department partners, state legislators, and task force recommendations often drive health policy development, and state health departments often play a major role in implementing these policies. Successful implementation also involves action by others, including health care professionals, hospitals, and emergency medical services (EMS). Sometimes implementation occurs in partnership with additional entities, such as AHA/ASA, which also promotes policy- and systems-level change: in 2004, it published a white paper on *Recommendations for the Establishment of Stroke Systems of Care*. Some states have introduced legislation for regulated designation of primary stroke centers in response to one of these recommendations:

A stroke system should ensure that all patients having signs or symptoms of stroke be transported to the nearest primary stroke center or hospital with an equivalent designation, given the available acute therapeutic interventions.

To better understand primary stroke center policy in each state, CDC collaborated with the National Association of Chronic Disease Directors and the University of Georgia for a study to collect information on the 2008 status of stroke policy across the 50 states and the District of Columbia. CDC later updated the study to include primary stroke center policy pending or enacted through July 2010.

Research Method

The University of Georgia research team, under the direction of Laurence O'Toole, PhD, collected information on primary stroke center policy and implementation for each state and the District of Columbia. Several assumptions guided the information-gathering process:

- A single source for nationwide primary stroke center policy does not exist. The broad definition of policy requires review of multiple sources, including state legislatures, state agencies, and public-private initiatives.
- Determining each state's policies requires data from multiple sources.
- Information collected must be verified through knowledgeable state officials and advocacy groups.

Step One: Collect Background Information

The research team collected background information on each state through a number of sources that helped ground and explain policy decisions. Basic information collected for each state included:

- Stroke mortality rate for adults aged 18 and older per 100,000 population.
- CDC funding status.
- Certification or acknowledgment of quality stroke care in a clinical setting.

Step Two: Identify Primary Stroke Center Policy or Regulations

The next step involved using preliminary search term combinations on state legislative and administrative websites to locate policies and other agency rules and regulations designating primary stroke centers. Search terms identified from preliminary literature reviews included:

- stroke center
- primary stroke center
- cardiovascular
- arterial disease
- Brain Attack Coalition⁶
- emergency medical system
- comprehensive stroke center
- Joint Commission
- cerebrovascular
- heart disease⁷
- telemedicine
- tPA

When these searches indicated that state health departments or EMS were involved in policy implementation, the researchers used the same search terms for those departments' websites. In addition to primary stroke center legislation and regulation, researchers identified EMS stroke transport protocols, criteria for certification of primary stroke centers, resources for hospitals seeking designation, and state agencies responsible for managing stroke networks.

Search engines and websites included:

- LexisNexis using the StateNet database.
- Each state's legislative database from 2000 to 2008, available from the National Conference of State Legislatures.
- The Healthy States report of the Council of State Governments.
- Each state's government website.

Step Three: Identify Additional Related Information

During the policy and legislation searches, the researchers recognized that they had identified other non-legislative factors that might support or hinder policy adoption or implementation. The team repeated the search to look for:

- Primary stroke center certification through The Joint Commission, an independent, not-for-profit organization that certifies and accredits health care organizations and programs in the United States. The Joint Commission certifies hospitals based on compliance with national standards and performance measurement expectations.
- Telehealth capabilities for remote stroke diagnosis and treatment.
- Programs for underrepresented minority populations and women.
- Geographic issues.
- Development, authorization, and implementation of hospital bypass rules.
- Timely administration of tPA.
- Influence of advocates for stroke prevention and treatment.
- Public-private partnerships and shared resources.

⁶ The Brain Attack Coalition is a nonprofit collaboration offering professional resources and networking opportunities to member organizations who work with stroke patients.

⁷ Stroke is often bundled into heart disease-related discussions described in such terms as "ischemic."

Step Four: Verify Information

The research team produced a summary for each state based on the information learned through the data collection process. Each summary received four rounds of review. First, two research team members reviewed the reports for accuracy. Next, staff with AHA/ASA reviewed, edited, and approved the summaries, followed by a similar review by representatives of the National Association of Chronic Disease Directors. This feedback from engaged parties and advocates for better stroke systems of care enhanced the accuracy and completeness of the summaries.

Update: July 2010

CDC conducted a search using the Westlaw search engine to update the reports through July 2010. The update included all bills, regulations, statutes, and administrative codes concerning primary stroke centers enacted between December 2008 and July 2010. The data from the Westlaw searches were then cross-referenced with updates from each individual state's government website. The funding status and mortality rate also were updated to reflect the most current data available.

What We Learned

The findings below and in the individual state summaries present July 2010 information from online information searches, informal recommendations about online information sources,⁸ and suggestions from AHA/ASA and the National Association of Chronic Disease Directors. This summary information paints a national picture of primary stroke center policy, including trends and patterns in the types of policies, the time frame for adoption, and facilitators to adoption.

In general, the review identified two primary mechanisms for designating primary stroke centers:

- Through The Joint Commission.
- Through stated-based policy or regulations.

In almost all states, primary stroke centers are designated through one or both of these mechanisms.

The Joint Commission

The Joint Commission accreditation process is voluntary and is intended to help organizations identify and correct problems and improve the quality of care they deliver. Standards for accreditation incorporate the recommendations of AHA/ASA and the Brain Attack Coalition with disease-specific guidelines. Hospital certification is based on:

- Compliance with a set of national standards.
- Effective use of recommendations and clinical practice guidelines to manage care.
- Implementation of performance measurement and improvement activities.

By mid-2009, each of the 50 states and the District of Columbia had at least one primary stroke center certified by The Joint Commission. In July 2010, more than 750 hospitals across the nation held certification as primary stroke centers. The Joint Commission certification process reaches many states that have no state policy encouraging the development of primary stroke centers.

The Joint Commission certification is a dynamic process that occurs continuously throughout the year. Hospitals must reapply for certification annually and may lose certification at reapplication.

⁸ Policy development is dynamic; the status of some state policies is likely to change soon.

National Summary of State Policy and Regulation

Some states have established policies that designate hospitals as primary stroke centers. State policy statements are found in legislation, executive orders, regulations, and official memoranda.

State-level primary stroke center policy activity first occurred in 2004 (see Figure 1) around the same time that AHA/ASA published its *Recommendations for the Establishment of Stroke Systems of Care*. That year, Florida and New Jersey enacted legislation, and Massachusetts and New York developed state regulations. The most active years of policy adoption to date were 2008 and 2009, with five states taking action to recognize primary stroke centers, followed by 2004 with action in four states.

Type of Policy

Public policy comes about in many different ways. This study examined state-level policies enacted by the state legislature, such as bills and resolutions, or adopted by the executive branch, such as administrative regulations or executive orders. The study identified six categories of primary stroke center policy status:

1. **Enacted primary stroke center legislation:** The state's legislative body has proposed, passed, and enrolled specific legislation that describes primary stroke center certification requirements and appoints a certification body or has directed an agency of the state to do so. Either the governor signed the legislation or it became law without the governor's signature within a specific time frame of passing. In a few states, a committee or task force also is mandated to provide advice or oversight.
2. **Pending primary stroke center legislation:** The state's legislative body has proposed a bill or other legislation related to primary stroke center certification, but the bill has not moved through the entire legislative process. Even though states with pending legislation did not have a formal primary stroke center policy as of July 2010, these states provide a sense of the most up-to-date policy developments and legislative trends nationwide.
3. **Non-legislative (administrative) primary stroke center policy:** Such policies include regulations, executive orders, or protocols. Examples include primary stroke center designation through a state program, EMS protocols, or hospital bypass policies. Some states have adopted administrative rules related to primary stroke centers in addition to enacted legislation. In states where enacted legislation may be general or broad, administrative rules can be used to clarify the specific process and criteria for

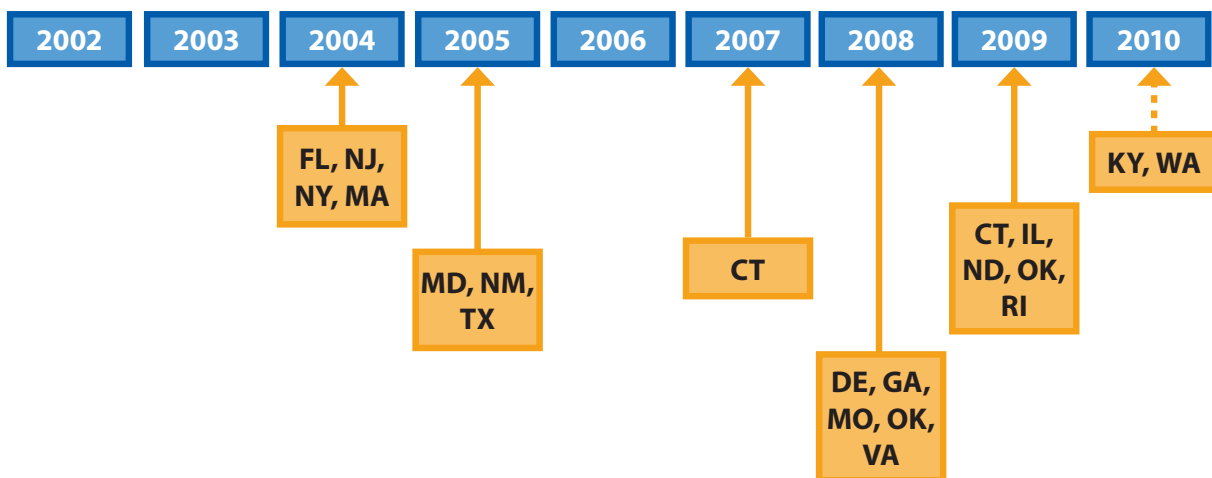


Figure 1. Timeline for enactment of primary stroke center legislative or non-legislative policy, July 2010.

primary stroke centers and are less complicated to amend than state statutes. For the purpose of this assessment, administrative rules were not counted unless they occurred without directive legislation.

4. **Both enacted primary stroke center legislation and other non-legislative policy:** States that fall into this category will generally have legislated primary stroke center policy and an administrative regulation related to emergency response transport or bypass policies.
5. **No primary stroke center policy identified using the search criteria.**
6. **Supporting legislation:** The research team identified another category of independent “supporting legislation” as relevant. This category includes legislative policy mandating an action that is likely to lead to or support primary stroke center legislation. Typically, these policies are in the form of resolutions or other legislative measures that charge a task force or the state with studying, proposing, or planning for regional and statewide stroke systems of care that often include primary stroke center consideration. A task force may be an independent body, be time-limited or ongoing, and have varied levels of financial support. There are states with no primary stroke center policy that do have legislated task forces that support primary stroke center certification.

As of July 2010, 19 states had enacted primary stroke center legislation, non-legislative (administrative) policy, or pending legislation (see Figure 2):

1. **Enacted legislation—14 states:** Delaware, Florida, Georgia, Illinois, Kentucky, Missouri, New Jersey, New Mexico, North Dakota, Oklahoma, Rhode Island, Texas, Virginia, and Washington.

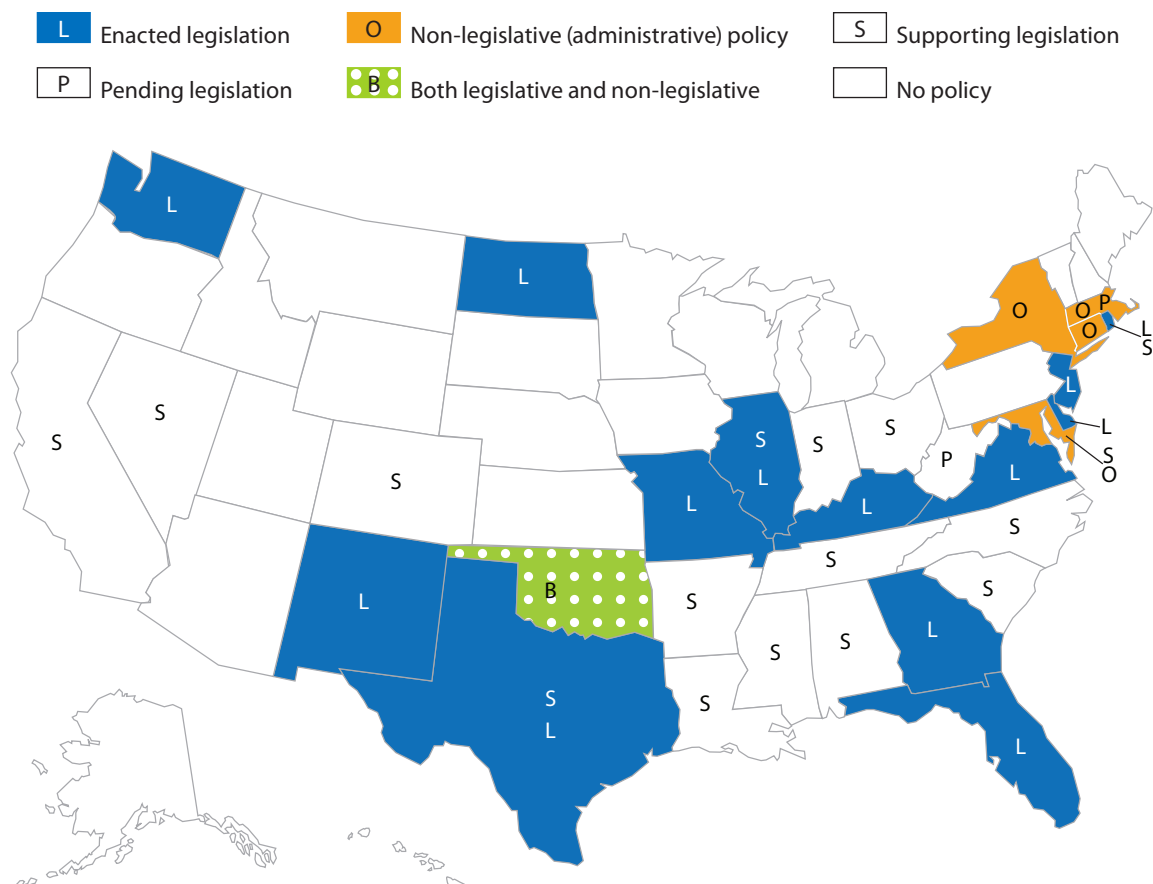


Figure 2. Type of primary stroke center policy, 2010.

2. **Pending legislation—two states:** Massachusetts (a study was ordered) and West Virginia.
3. **Non-legislative (administrative) policy—five states:** Connecticut, Maryland, Massachusetts, New York, and Oklahoma. States with primary stroke center administrative rules clarifying legislation include Florida, New Jersey, Oklahoma, and Texas.
4. **Both enacted legislation and non-legislative policy—one state:** Oklahoma.
5. **No primary stroke center policy—31 states and the District of Columbia:** Of those, some had passed supporting legislation (see Figure 2).
6. **Supporting legislation—16 states** (as of July 2010): Arkansas, Alabama, California, Colorado, Illinois, Indiana, Louisiana, Maryland, Mississippi, Nevada, North Carolina, Ohio, Rhode Island, South Carolina, Tennessee, and Texas. In several states, the task force or study was time-limited and had ended. Twelve of the states with supporting legislation had no other primary stroke center policy. A number of other states had a task force or committee that was supported by a state agency, a state program, or a key partner, but those are not included in this report.

Criteria for Designation

For a hospital to be designated as a primary stroke center, it must meet specific policy criteria established in one of two ways:

1. States adopt The Joint Commission certification criteria.
2. A state agency is given the authority to develop a distinct process and criteria.

Of the 18 states with enacted primary stroke center legislation or non-legislative policy as of July 2010, three states accept The Joint Commission accreditation outright as the sole criterion for state designation as a primary stroke center. The other 15 states have a state-based process for primary stroke center criteria development and designation, often combining the state-based authority with The Joint Commission or Brain Attack Coalition standards or accepting The Joint Commission accreditation in addition to state-based criteria. In most of these cases, the legislation or administrative policy gave a state agency, typically the state’s department of health or EMS, the authority to develop designation criteria.

Designation Criteria	
<i>The Joint Commission</i>	<i>State Identified</i>
Delaware, Florida, Georgia, Kentucky, Maryland, Rhode Island, Virginia, Washington	Connecticut, Georgia, Illinois, Maryland, Massachusetts, Missouri, New Jersey, New York, North Dakota, Oklahoma, Rhode Island, Texas, Virginia, Washington
New Mexico, not identified	

Regional Differences

Regional differences in the proportion of states with primary stroke center policy are visible when states are grouped by the four US Census Bureau regions (see Figure 3):

- **Northeast:** Five of nine Northeastern states had some form of primary stroke center policy; three of the five had non-legislative policy. In fact, the majority of East Coast states (10 of 16) had some form of primary stroke center policy or legislation.
- **West:** Only two of the 13 states in the Western region had enacted or pending legislation or other non-legislative policy.

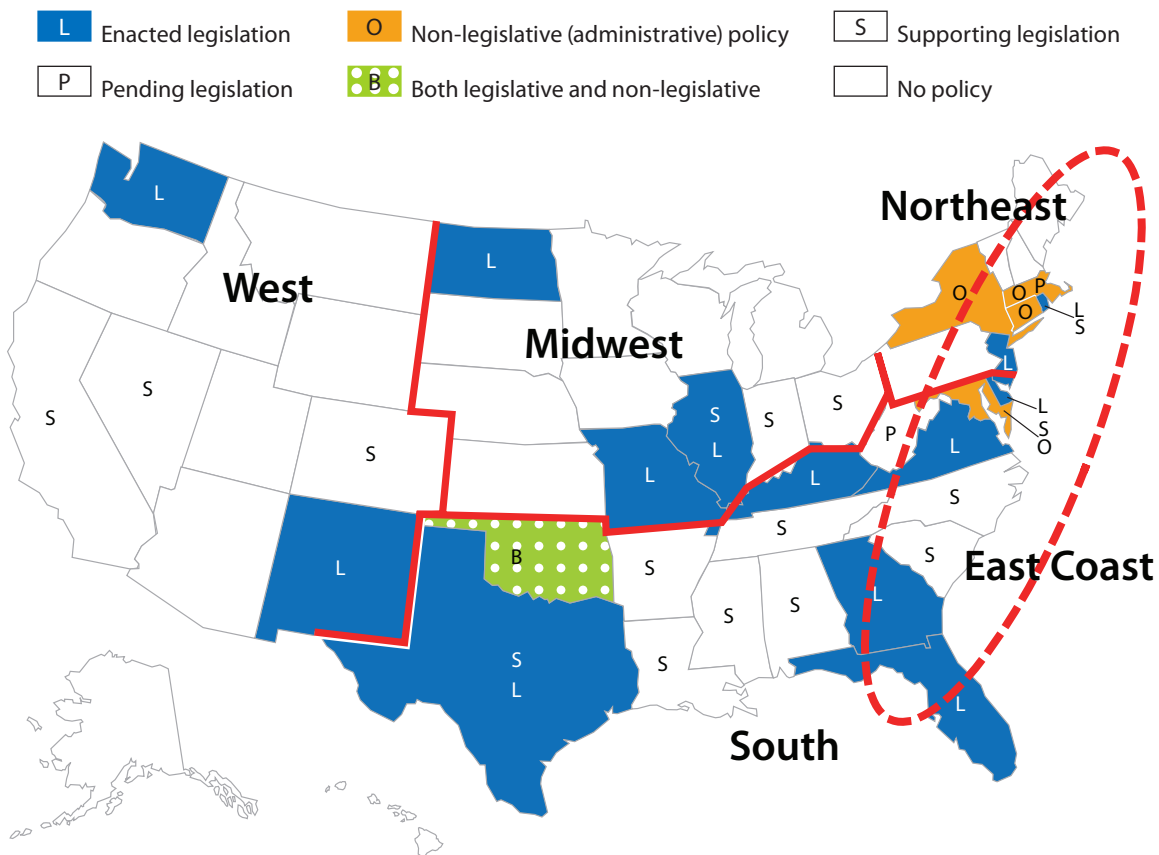


Figure 3. Regional distribution of primary stroke center policy, by U.S. Census Bureau regions, 2010.

- **South:** Of the 16 states in the Southern region and the District of Columbia, eight had some form of primary stroke center policy.
 - “Stroke Belt”: Of the eight states in this high-risk region⁹ (Alabama, Arkansas, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee) only one had enacted or pending legislation or other non-legislative policy.
- **Midwest:** Three of the 12 Midwest region states had some form of primary stroke center policy.

CDC Funding

CDC supports several public health efforts that address stroke. State health departments receive funding at varying levels to implement programs and collect data. A chart of states, funded programs, and primary stroke center policy action is provided in Appendix 1.

National Heart Disease and Stroke Prevention Program

As of 2010, CDC funded health departments in 41 states and the District of Columbia to develop effective strategies to reduce the burden of and risk factors for heart disease and stroke through its National

⁹ Several southeastern states have a persistently heavy stroke mortality burden (50 percent greater than the national rate). See: Cushman M, Cantrell RA, McClure LA, Howard G, Prineas RJ, Moy CS, et al. *Estimated 10-year stroke risk by region and race in the United States. Ann Neurol.* 2008;64(5):507-13.

Heart Disease and Stroke Prevention (NHDSPP) Program. The program emphasizes policy and systems changes that promote heart-healthy and stroke-free living and working conditions.

CDC provides two levels of funding for the NHDSPP Program:

- **Basic Implementation:** This is the highest level of funding. These states receive support to implement worksite, health care, and community policy and systems changes.
- **Capacity Building:** These states receive funding to develop collaborations, define the state's heart disease and stroke burden, and develop state plans for treatment and prevention.

Paul Coverdell National Acute Stroke Registry

The mission of the Paul Coverdell National Acute Stroke Registry (PCNASR) is to:

- Measure, track, and improve the quality of and access to care for stroke patients from onset of stroke symptoms through rehabilitation and recovery.
- Decrease the rate of premature death and disability from acute stroke.
- Eliminate disparities in care.
- Support development of stroke systems of care that emphasize quality of care.
- Improve access to rehabilitation and opportunities for recovery after stroke.
- Increase the workforce capacity and scientific knowledge for stroke surveillance within stroke systems of care.

The data collected guide quality improvement interventions from onset of stroke through hospital discharge to improve adherence to evidence-based clinical practice guidelines and reduce the incidence of recurrent stroke. As of 2010, two of six states funded by PCNASR have primary stroke center legislation and/or related policy; a third state previously funded by PCNASR has legislation pending.

Stroke Networks

CDC funded four multistate stroke networks beginning in 2002 to increase stroke awareness and enhance stroke prevention and quality of care. Funding for the networks ended in June 2010. Public health and medical professionals, policy makers, and community health advocates participated in the networks, which aimed to increase health collaboration across state boundaries and leverage efforts within a geographic region to encourage stroke-related partnerships, education, training, and systems-change strategies.

The four stroke networks were:

- Delta States Stroke Consortium, funded in 2002 (Alabama, Arkansas, Louisiana, Mississippi, and Tennessee).
- Tri-State Stroke Network, funded in 2002 (Georgia, North Carolina, and South Carolina).
- Great Lakes Regional Stroke Network, funded in 2002 (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin).
- Northwest Regional Stroke Network, funded in 2007 (Alaska, Idaho, Montana, Oregon, and Washington).

Of the 19 states with enacted or pending primary stroke center legislation or non-legislative policy all but two received some form of funding from the CDC Division for Heart Disease and Stroke Prevention:

- **NHDSP Basic Implementation—eight states:** Florida, Georgia, Massachusetts, Missouri, New York, Virginia, Washington, and West Virginia. Massachusetts has both non-legislative and pending legislative primary stroke center policy.
- **NHDSP Capacity Building—nine states:** Connecticut, Illinois, Kentucky, Maryland, New Jersey, North Dakota, Oklahoma, Rhode Island, and Texas.
- **Not funded—two states:** Delaware and New Mexico.
- **PCNASR—three states:** Georgia, Illinois, and Massachusetts.
- **Stroke Networks—three states:** Georgia, Illinois, and Washington.

Some states receive funding for more than one effort (see Appendix 1).

Discussion

Primary stroke center policy varies considerably across the 50 states, including the type of policy and the body authorized to designate or certify centers. As of July 2010, 19 of the 50 states had enacted primary stroke center legislation, non-legislative (administrative) policy, or pending legislation. Of these:

- Seventeen received funding from CDC’s NHDSP Program.
- Four had a legislatively mandated stroke task force or advisory group.
- About half had established their own criteria for certification.
- Three belonged to a CDC-funded stroke network.

Research also revealed geographic differences. State-level primary stroke center policies are most evident in the Northeast, with non-legislative policy most prevalent. Midwestern and Western states generally had not enacted primary stroke center policy or regulation, with the 2010 exception of Washington. Only two of the eight states in the high-risk “Stroke Belt” had primary stroke center policy or regulation.

The criteria required for primary stroke center designation also varies. Some states adopt The Joint Commission criteria or accept The Joint Commission designation. When an independent authority or state agency certifies hospitals, the criteria for designation may or may not be the same as those in other states or those used by The Joint Commission.

Furthermore, no state imposes penalties for failing to seek or achieve primary stroke center certification as of July 2010. However, hospitals with certification may be in a better position to receive greater Medicare reimbursement for acute stroke patients for whom tPA is administered; this might encourage hospitals to seek certification.

Taking policy action on a social need or issue is a complex and often multiyear process that includes:

- **Agenda setting:** Stakeholders identify and select suitable issues that are significant enough to attract policy makers to consider governmental action to address them.
- **Deliberation:** Stakeholders propose and debate options to address the problem.
- **Selection:** Policy makers decide on the design of the policy.

Successful implementation also often requires problem-solving as well as creative and coordinated efforts on the part of issue champions to turn policy intention into effective action. Further research has identified facilitators, barriers, and resources for successful policy development and implementation for primary stroke centers.¹⁰ However, more research is needed to assess the effectiveness of primary stroke centers in improving stroke care, develop model policy language, and identify unintended consequences of primary stroke center policy. This type of information can inform policy language for primary stroke center designation and the legislative process. This information also could promote the spread of effective primary stroke center policy.

State PSC Policy at a Glance

Appendix 2 includes a brief primary stroke center policy summary for each state and the District of Columbia. Each summary includes state-specific data, legislated action (if any), and related state initiatives identified through state websites or other readily available sources. Related initiatives include supporting policy, administrative policies, and a sampling of state work on stroke. The related initiatives are intended to provide a glimpse of a state’s work related to stroke, not a detailed or exhaustive summary.

Alabama	Kentucky	North Dakota
Alaska	Louisiana	Ohio
Arizona	Maine	Oklahoma
Arkansas	Maryland	Oregon
California	Massachusetts	Pennsylvania
Colorado	Michigan	Rhode Island
Connecticut	Minnesota	South Carolina
Delaware	Mississippi	South Dakota
District of Columbia	Missouri	Tennessee
Florida	Montana	Texas
Georgia	Nebraska	Utah
Hawaii	Nevada	Vermont
Idaho	New Hampshire	Virginia
Illinois	New Jersey	Washington
Indiana	New Mexico	West Virginia
Iowa	New York	Wisconsin
Kansas	North Carolina	Wyoming

¹⁰ See for example Slade CP, O’Toole LJ Jr, Brewer JR, Gase LN. Barriers and facilitators to implementing primary stroke center policy in the United States: results from four case study states. *Am J Public Health.* 2011;101(3):561-6.

CDC Funding Snapshot

State	CDC Funding					First Year Funded	Year Policy Passed
	NHDSP: Capacity Building	NHDSP: Basic Implementation	PCNASR	Regional Stroke Network	Not Funded		
States with Enacted Primary Stroke Center Legislation							
DE					●		2008
FL		●				2002	2004
GA		●	2001–10	●		1998	2008
IL	●		2002–10	●		2000	2009
KY	●					1998	2010
MO		●				1998	2008
ND	●					2003	2009
NJ	●					2008	2004
NM					●		2005
RI	●					2007	2009
TX	●					2002	2005
VA		●				1999	2008
WA		●		●		2003	2010
States with Non-Legislative (Administrative) Primary Stroke Center Policy							
CT	●					2000	2007
MA		●	2001–10			2000	2004
MD	●					2008	2005
NY		●				1998	2004
States with Enacted Primary Stroke Center Legislation and Non-Legislative Policy							
OK	●					2000	2008,09
States with Primary Stroke Center Legislation Pending							
MA		●	2001–10			2000	
WV		●				2008	
States with Primary Stroke Center Supporting Legislation (current or past)							
AL	●			●		2008	2001
AR		●		●		2000	2005
CA	●		2002–04			2007	2003, 2005
CO	●					2000	2002
IL	●		2002–07	●		2000	2002
IN					●		2004, 2008
LA	●			●		1999	2001
MD	●					2008	2001
MS	●			●		1998	2001
NC		●	2002–10	●		1998	1995
NV					●		2005
OH	●		2001–04 2007–10	●		2000	2000
RI	●					2007	2004
SC		●		●		1998	2008
TN	●					2001	2001, 2008
TX	●					2002	1999

NHDSP: National Heart Disease and Stroke Prevention Program
 PCNASR: Paul Coverdell National Acute Stroke Registry

APPENDIX 2

Appendix 2. Primary Stroke Center Policy: States at a Glance

Alabama

PRIMARY STROKE CENTER POLICY

AL

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	49 ²
Age-adjusted Death Rate per 100,000 Population (18+)	75.1 ²
Joint Commission–certified Primary Stroke Centers	2 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Partnerships

The Alabama Heart Disease and Stroke Prevention (HDSP) Program participated in the Delta States Stroke Consortium, led by the Arkansas HDSP Program and including HDSP Programs in Louisiana, Mississippi, and Tennessee.⁴ The CDC-funded network increased stroke prevention activities in the region. Consortium funding ended in June 2010.

Cardiovascular Disease Education, Prevention, and Treatment

Alabama previously passed three house joint resolutions for the Alabama Public-Private Heart Disease and Stroke Prevention Task Force, which has since disbanded. The Task Force provided state-of-the-art information on stroke education, prevention, and treatment to health care providers.

The Task Force:

- Examined the incidence and causes of stroke deaths and risks, including populations at highest risk for developing heart disease and stroke.
- Established and publicized a profile of the social and economic burden of stroke in Alabama.
- Identified effective strategies for preventing and controlling risks for stroke, based on recommendations of the American Heart Association/American Stroke Association.
- Adopted and promoted a statewide comprehensive stroke prevention plan.
 - Established commitments to implement the plan from public, private, and community partners.
 - Coordinated participation and communication among partners regarding achievement of the plan's aims.

- Considered new ideas for improving stroke prevention from public and private organizations.
- Determined the impact of delayed or inappropriate stroke treatment on the quality of life and financial resources of patients.
- Studied the economic impact of early stroke treatment on quality of care, reimbursement, and rehabilitation.
- Defined high-quality treatment for stroke and adopted and disseminated guidelines for the treatment of stroke patients.
- Completed and implemented a plan of action for achieving these goals.

Stroke Education and Prevention Plan

In the Alabama Department of Public Health (DPH), the [Cardiovascular Health Branch](#) provides education on the importance of controlling high blood pressure and high blood cholesterol, recognizing the signs and symptoms of a heart attack or stroke, and calling 9-1-1 as soon as signs and symptoms are recognized. The Branch also raises awareness of cardiovascular disease, improves the quality of heart disease and stroke care, and supports change in high-risk communities.

As a subcommittee of the DPH Cardiovascular Health Advisory Council, Alabama's Stroke Systems Operations Group is responsible for upcoming changes to the stroke component of the state heart disease and stroke prevention plan. The group includes members from DPH, emergency medical services, the American Heart Association, and the medical community.

Notes

1. The information provided is current as of July 2010.
2. Alabama ranked 49th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Alabama](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Alaska

PRIMARY STROKE CENTER POLICY

AK

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	13 ²
Age-adjusted Death Rate per 100,000 Population (18+)	54.3 ²
Joint Commission–certified Primary Stroke Centers	2 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Partnerships

The Alaska Heart Disease and Stroke Prevention (HDSP) Program was a member of the Northwest Regional Stroke Network, led by the Washington State HDSP Program and including HDSP Programs in Idaho, Montana, and Oregon. The CDC-funded network's mission was to facilitate, through collaboration, equal access to high-quality stroke care throughout the Northwest. Network funding ended in June 2010.

Stroke Education and Prevention

The Take Heart Alaska Coalition is an education and prevention effort involving about 50 active organizations/participants. The coalition focuses educational resources on women and their health. The coalition has developed:

- The *Alaska Cardiovascular Disease Burden Report*.
- A report on regional burden of stroke in partnership with the Northwest Regional Stroke Network.
- A detailed state stroke prevention plan.

Cardiovascular Disease State Plan

In December 1998, the Alaska Division of Public Health developed a comprehensive plan to reduce heart disease and stroke in Alaska. The *Take Heart Alaska Cardiovascular Disease Prevention Plan* was developed in collaboration with a wide range of partners.

Notes

1. The information provided is current as of July 2010.
2. Alaska ranked 13th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Alaska](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Arizona

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	2 ²
Age-adjusted Death Rate per 100,000 Population (18+)	47.7 ²
Joint Commission–certified Primary Stroke Centers	10 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Cardiovascular Disease Prevention

The goal of Arizona's [Heart Disease and Stroke Prevention \(HDSP\) Program](#) is to reduce heart disease and stroke deaths in the state by increasing awareness and surveillance. The program is a partner in the Arizona Cardiovascular Coalition, a collaboration of health care professionals, managed care organizations, community stakeholders, civic leaders, and media representatives working to improve the care of persons with cardiovascular disease.

Cardiovascular Disease State Plan

In close partnership with the American Heart Association/American Stroke Association, the Arizona HDSP Program developed the [Arizona Cardiovascular Disease State Plan](#) in 2003. The plan helps coordinate prevention efforts throughout the state.

Stroke Awareness

The Arizona Legislature proclaimed February 2008 as Go Red for Women Month and recognized the importance of the ongoing fight against heart disease and stroke.

Notes

1. The information provided is current as of July 2010.
2. Arizona ranked 2nd of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Arizona](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention



Arkansas

PRIMARY STROKE CENTER POLICY

AR

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	51 ²
Age-adjusted Death Rate per 100,000 Population (18+)	82.1 ²
Joint Commission–certified Primary Stroke Centers	3 ³
CDC Heart Disease and Stroke Prevention Program Status	Basic Implementation ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Cardiovascular Disease Prevention

The Arkansas Heart Disease and Stroke Prevention Program (HDSP) Program provides funding, direction, and support for interagency cooperation to chronic cardiovascular disease initiatives.

Stroke Partnerships

The Arkansas HDSP Program led the Delta States Stroke Consortium, which also included HDSP Programs in Alabama, Louisiana, Mississippi, and Tennessee. The CDC-funded network increased stroke prevention activities in the region. Consortium funding ended in June 2010.

Minority Health

In 2005, [House Resolution 1022](#) recognized that minorities are more likely to die from stroke (as well as other diseases). The resolution also demonstrated Arkansas' desire to establish a Minority Health and Health Disparities Month.

Stroke Task Force

[Senate Bill 326](#) created the Acute Stroke Care Task Force with 12 members representing a broad range of health care professions and interest groups. Among others, members represent:

- American Heart Association/American Stroke Association.
- Minority Health Commissions.
- Arkansas Medical, Dental, and Pharmaceutical Association.
- The "community."



In addition to working on stroke prevention, public awareness, and policy and standards, the Acute Stroke Care Task Force makes recommendations to the board of health and generates private and public funds for achieving task force goals.

The task force has

- Developed a conceptual framework for a model stroke program in the state, including prevention as well as acute care, rehabilitation care, and follow-up care.
- Initiated discussions of the status of the current systems of stroke care in the state, including gaps in and barriers to making changes in the system.
- Worked to develop a stroke registry.

Telemedicine

The University of Arkansas for Medical Sciences (UAMS) supports a telemedicine program recognized by Harvard University and the American Telemedicine Association. The program's most successful and influential research involves antenatal and neonatal births through Arkansas' ANGELS (Antenatal and Neonatal Guidelines, Education, and Learning System).

Virtual Emergency Room Support

In July 2008, the UAMS Center for Distance Learning partnered with the Rural Hospital Program to expand the telemedicine program's reach. With support from the Arkansas Department of Human Services, UAMS created the Stroke Assistance through Virtual Emergency Support (AR SAVES) program, a 24/7 stroke triage program within Arkansas's rural emergency rooms.

AR SAVES allows rural patients to be diagnosed and treated for stroke without leaving their hometown hospital. Through interactive, real-time video, neurologists from two tertiary care centers interview patients and review CT scans to make prompt diagnoses. AR SAVES promotes quicker access to life-saving medication for stroke patients, improving health care outcomes and shortening hospital stays.

Notes

1. The information provided is current as of July 2010.
2. Arkansas ranked 51st of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site.](#)
3. [The Joint Commission.](#)
4. CDC National Heart Disease and Stroke Prevention Program: [Arkansas.](#)
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

For more information please contact Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30333
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E-mail: cdcinfo@cdc.gov
Web: www.cdc.gov

California

PRIMARY STROKE CENTER POLICY



State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	25 ²
Age-adjusted Death Rate per 100,000 Population (18+)	63.3 ²
Joint Commission–certified Primary Stroke Centers	84 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Prevention and Treatment

In 2004, [Assembly Bill 1220](#) created the Heart Disease and Stroke Prevention and Treatment Task Force in the California Department of Health Services (DHS), which disbanded in 2007. The task force:

- Examined information on the incidence and causes of heart disease and stroke deaths and disease risk factors.
- Publicized a profile of heart disease and stroke deaths and suggested methods for preventing heart disease and stroke for people at risk.
- Identified effective priority strategies for preventing and controlling heart disease and stroke.
- Received and considered reports, data, and testimony to assess opportunities for collaboration and to identify gaps in heart disease and stroke prevention and treatment.
- Created a comprehensive Heart Disease and Stroke Prevention and Treatment State Master Plan.

Stroke Awareness

California designated May 2003 and 2005 to be Stroke Month and urged all citizens of the state to become familiar with the warning signs, symptoms, and risk factors associated with stroke.

In 2008, the legislature designated February as American Heart Month to raise awareness of the importance of the ongoing fight against heart disease and stroke and February 1, 2008, as Wear Red Day and urged all citizens to show their support for women and the fight against heart disease by commemorating this day by wearing the color red.



Further, [Assembly Concurrent Resolution 133](#) recognized May 2008 as Black Barbershop Health Outreach Month and encouraged outreach on health disparities at all barbershops throughout California. Volunteers for the Black Barbershop Health Outreach Program measured blood pressures, screened for diabetes, and referred customers to participating physicians or health care facilities if there are abnormal findings, and provided culturally appropriate educational materials about obesity, prostate cancer, proper eating habits, and information about the signs and symptoms of other diseases affecting the African American community.

Stroke Education Campaign

In 2005, under [Senate Bill 209](#), DHS implemented a stroke education campaign, which ended in 2007. The campaign's goal was to reduce the incidence of stroke by:

- Providing information to county public health offices, area agencies on aging, senior centers, senior advocacy groups, and other senior network stakeholders.
- Developing and conducting seminars for hospital and emergency personnel and staff in hospitals, senior centers, senior housing, mobile home parks, family complex housing projects, and bingo parlors.
- Providing stroke symptom flyers for public buildings, hospitals and clinics, schools and colleges, public and private clubs, hotel and motel guest rooms, restaurants, grocery stores, churches, news media, and all senior group organizations.

Notes

1. The information provided is current as of July 2010.
2. California ranked 25th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [California](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Colorado

PRIMARY STROKE CENTER POLICY



State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	12 ²
Age-adjusted Death Rate per 100,000 Population (18+)	52.2 ²
Joint Commission–certified Primary Stroke Centers	10 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Advisory Board

The [Colorado Stroke Advisory Board](#) was mandated by House Bill 1125 in 2002 to examine the problem of stroke in Colorado and to report back to the Joint Budget Committee and the House and Senate Health, Education, Welfare, and Institutions Committees. The Board's 2003 recommendations included making information on stroke prevention, signs and symptoms of stroke, and responding to stroke more readily available; promoting systems change and policy development for stroke prevention, treatment, and rehabilitation; and establishing a state-level stroke registry. The Board was disbanded in 2004.

Stroke Alliance

The [Colorado Stroke Alliance](#) (CSA) is part of the overall quality improvement initiative for stroke care in Colorado. Quality and process improvement reports are aggregated, and data are de-identified to protect the privacy of hospitals and their patients. CSA reports aggregate findings back to participating sites. Participation in the Alliance is voluntary and open to all Colorado hospitals, regardless of bed count, patient volume, or geographic location. Participating hospitals must agree to implement the American Heart Association/American Stroke Association Get With The Guidelines–Stroke program. Hospitals that choose to participate in CSA receive a stipend to help cover costs associated with implementing the program.

Stroke Awareness and Education

In 2010, Colorado passed [House Joint Resolution 10-1034](#), which supports public awareness, education of emergency medical services (EMS) providers and other health care workers, and education in public schools related to stroke. It also encourages hospitals in Colorado to adopt national standards for heart disease and stroke treatment, such as Get With The Guidelines, and to seek accreditation as stroke



centers from The Joint Commission; supports improving the ability of EMS responders to communicate with patients and callers who do not speak English as a primary language; and supports the use of telemedicine in rural areas.

The Colorado General Assembly, in recognition of the importance of the ongoing fight against heart disease and stroke, recognized Go Red for Women Day on February 2, 2007. The Assembly also proclaimed February 2009 as American Heart Month, and February 6, 2009, to be National Wear Red Day in Colorado.

Notes

1. The information provided is current as of July 2010.
2. Colorado ranked 12th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Colorado](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Connecticut

PRIMARY STROKE CENTER POLICY



State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	15 ²
Age-adjusted Death Rate per 100,000 Population (18+)	55.5 ²
Joint Commission–certified Primary Stroke Centers	12 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Primary Stroke Center Designation

The [Connecticut Department of Public Health \(DPH\)](#) supports a program to designate and recognize primary stroke centers in the state. Designation is based on criteria and recommendations from the American Heart Association/American Stroke Association and Brain Attack Coalition. The goal of the program is to decrease premature death and disability associated with stroke.

To be recognized as a [primary stroke center](#) by DPH, hospitals must demonstrate their commitment "...to provide quality stroke care services for the targeted community." Hospitals must have:

- An acute stroke team available 24 hours a day, seven days a week, including a physician and supporting team members with "...experience in diagnosing and treating patients who have cerebrovascular disease."
- Established protocols that outline how stroke patients will be treated.
- Stroke team member(s) at the patient's bedside within 15 minutes of arrival at the hospital or from the start of stroke symptoms for patients already in hospital units.
- A record of call times, response times, patient diagnosis, treatments, and outcomes.
- Annual training on stroke diagnosis and treatment for emergency department personnel and support staff.
- An established communication process with emergency medical services to ensure quick transport and treatment of stroke patients.
- Access for patients to neurosurgical services within two hours of arrival.



- Neuroimaging and laboratory services available 24 hours a day, seven days a week.
- An established stroke unit for stroke patient care beyond the initial treatment period.
- Community education programs at least twice a year that address stroke prevention, recognition of signs and symptoms of stroke, calling 9-1-1, diagnosis, and treatments.
- A formal quality improvement program, including the ability to track and evaluate outcomes.

Notes

1. The information provided is current as of July 2010.
2. Connecticut ranked 15th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Connecticut](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Delaware

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	14 ²
Age-adjusted Death Rate per 100,000 Population (18+)	55.2 ²
Joint Commission–certified Primary Stroke Centers	2 ³
CDC Heart Disease and Stroke Prevention Program Status	Not funded ⁴

Enacted State Primary Stroke Center Legislation

On January 1, 2009, [House Bill 378](#) established criteria to certify acute care hospitals as primary stroke centers. Any hospital that received a Certificate of Distinction for Primary Stroke Centers from the Joint Commission became a state-designated primary stroke center.

Related State Policy and Initiatives⁵

Chronic Disease Task Forces

Delaware has two task forces that address chronic health problems:

- In 2003, [House Joint Resolution 10](#) created a task force on chronic illness and disease management and prevention. The task force works with the private and public sectors in Delaware to coordinate disease management strategies. A final report was due from the task force in 2004.
- The [Physical Education Task Force](#), created in 2005, examines physical activity and education policies and programs in Delaware. The task force created a plan to increase physical activity and education and reduce childhood obesity throughout the state.

Stroke Awareness

In 2005, Delaware established May 2005 as American Stroke Month. The state also recognizes February as Women's Heart Awareness Month.

Notes

1. The information provided is current as of July 2010.
2. Delaware ranked 14th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).

3. The Joint Commission.
4. CDC National Heart Disease and Stroke Prevention Program.
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

For more information please contact Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30333
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E-mail: cdcinfo@cdc.gov
Web: www.cdc.gov

District of Columbia

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	9 ²
Age-adjusted Death Rate per 100,000 Population (18+)	50.6 ²
Joint Commission–certified Primary Stroke Centers	3 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Cardiovascular Health Program

The District's [Cardiovascular Health Program](#) (CHP) monitors incidence of heart disease, stroke, and related risk factors throughout the District. As of 2007, CHP has designated a task force to evaluate its efforts. This task force has a subcommittee that is identifying policies and potential policy changes related to cardiovascular health.

CHP has established a Cardiovascular Forum, a consortium of partners who plan and implement strategies to address cardiovascular disease and reduce health disparities. The Forum covers Maryland, the District of Columbia, and northern Virginia.

CHP's Chronic Care Initiative is a five-year quality improvement effort aimed at care of those diagnosed with cardiovascular disease as well as hypertension, diabetes, and other risk factors for cardiovascular disease.

Notes

1. The information provided is current as of July 2010.
2. The District of Columbia ranked 9th of the 50 states and the District for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [District of Columbia](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention



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Florida

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	10 ²
Age-adjusted Death Rate per 100,000 Population (18+)	51.4 ²
Joint Commission–certified Primary Stroke Centers	89 ³
CDC Heart Disease and Stroke Prevention Program Status	Basic Implementation ⁴

Enacted State Primary Stroke Center Legislation

In 2004, [Senate Bill 1590](#)—the Certified Stroke Treatment Centers law—defined two types of stroke centers in Florida: primary and comprehensive. Under the law, Florida’s Agency for Health Care Administration (AHCA) adopted the Joint Commission’s criteria to evaluate primary stroke centers and developed additional criteria for comprehensive stroke centers. To be designated as a primary or comprehensive stroke center, a hospital must present certification from the Joint Commission or provide an official declaration that it meets the criteria outlined in the law. Hospitals must notify AHCA if they no longer meet the criteria.

AHCA distributes a [list of primary and comprehensive stroke centers](#) to state emergency medical service (EMS) providers. As of April 2009, the agency reported:

- 13 comprehensive stroke centers.
- 111 primary stroke centers.

The law also requires all EMS providers to use a “triage assessment tool” developed by the Florida Department of Health. EMS providers also must develop protocols for assessing, treating, and transporting stroke patients to the most appropriate hospital.

The [Florida Senate](#) identified three costs associated with the law:

- The cost to AHCA to create a list of primary and comprehensive stroke centers and to develop and adopt rules and criteria.
- The cost to the Florida Department of Health to develop a stroke triage assessment tool.
- The cost to cities and counties that operate EMS programs to develop and maintain assessment, treatment, and transportation protocols.

Related State Policy and Initiatives⁵

Heart Disease and Stroke Prevention State Plan

The Florida Department of Health's Heart Disease and Stroke Prevention (HDSP) Program prepared a state plan for 2009–2012 in collaboration with:

- American Heart Association/American Stroke Association
- Arthritis Prevention and Education Program
- Healthy Communities, Healthy People Program
- Comprehensive Cancer Control Program
- Diabetes Prevention and Control Program
- Bureau of Epidemiology, Chronic Evaluation, and Surveillance.

A key strategy in the plan includes training first responders in the EMS Tracking and Reporting System and training emergency medical technicians and paramedics in advanced stroke life support in Florida's 33 rural counties.

Cardiovascular Health Council

The American Heart Association/American Stroke Association spearheads the Florida Cardiovascular Health Council and works closely with the HDSP Program to implement a stroke systems plan, convening the committees to coordinate the professional education, data collection, stroke center and hospital commitment, emergency response, and other issues important to improving stroke outcomes. This partnership is dedicated to improving the statistics related to heart disease and stroke.

Stroke Awareness

The Florida Senate recognized May 2003 as Stroke Awareness Month in Florida. The legislature recognized May as the Power to End Stroke Month in 2008, 2009, and 2010 and also recognized Go Red For Women Day in March 2008 and 2010, encouraging all residents to show their support for women and the fight against cardiovascular diseases by wearing the color red.

Notes

1. The information provided is current as of July 2010.
2. Florida ranked 10th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Florida](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

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Web: www.cdc.gov

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	36 ²
Age-adjusted Death Rate per 100,000 Population (18+)	67.9 ²
Joint Commission–certified Primary Stroke Centers	29 ³
CDC Heart Disease and Stroke Prevention Program Status	Basic Implementation ⁴

Enacted State Primary Stroke Center Legislation

Georgia passed Senate Bill 549—the Coverdell-Murphy Act—in 2008. The bill created a two-level identification system for stroke centers: primary stroke centers in metropolitan areas and remote treatment stroke centers in rural areas.

- The Joint Commission certifies primary stroke centers.
- The Georgia Department of Community Health (DCH) certifies remote treatment stroke centers.
- DCH provides grants for personnel and equipment to hospitals that seek remote treatment stroke center status and show a financial need.
- Each year, certified stroke centers must report statistics related to service use and patient demographics.

DCH distributes an annual list of primary and remote treatment stroke centers to state emergency medical service (EMS) providers. The Coverdell-Murphy Act also notes that it is in the public's interest to transport stroke patients to "facilities that have specialized programs for providing timely and effective treatment for stroke victims" and directs the establishment of treatment protocols.

The Act called for the development of a stroke triage assessment tool. The Department of EMS identified the Cincinnati Stroke Scale as an appropriate model. The department is also responsible for developing protocols for assessing, treating, and transporting stroke patients.

Related State Policy and Initiatives⁵

Stroke Partnerships

The Georgia Heart Disease and Stroke Prevention (HDSP) Program participated in the Tri-State Stroke Network, which also included HDSP Programs in North Carolina and South Carolina. The CDC-funded network's mission was to support stroke prevention and control by:

1. Increasing public awareness of the signs and symptoms of stroke as well as the need to treat stroke as a medical emergency.

2. Addressing the geographic disparity in stroke deaths in the Tri-State area.

Network funding ended in June 2010.

Stroke Registry

In 2001, CDC provided funding for Georgia to launch the Coverdell Acute Stroke Registry at 46 hospitals. The primary goal of the registry is to improve the care of acute stroke patients in the hospital setting. The registry addresses quality improvement in multiple areas of stroke care, from rapid screening, diagnosis, and intervention for patients experiencing an acute stroke to secondary prevention measures, such as blood pressure control, smoking cessation, and treatment of high cholesterol to reduce the incidence of recurrent stroke after hospital discharge. In 2009, 52 state hospitals were participating in the program.

Stroke Awareness

In 2003, the Georgia General Assembly designated May as Stroke Awareness Month. Later in 2005, the state approved House Bill 750 to provide special license plates promoting stroke awareness. Sale of the plates benefits the Center for Telehealth of the Medical College of Georgia. The state also recognized National Wear Red Day in 2008, 2009, and 2010.

Cardiovascular Health Initiative

The Coverdell Acute Stroke Registry and the Stroke and Heart Attack Prevention Program (SHAPP) are the major components of the Georgia Cardiovascular Health Initiative. SHAPP is a county health department-based education and care program that seeks to identify people at risk for heart attack and stroke and to teach them how to manage their lifestyles to prevent complications. Services include screening, referral to doctors, diagnosis, and treatment.

Notes

1. The information provided is current as of July 2010.
2. Georgia ranked 36th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Georgia](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Hawaii

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	22 ²
Age-adjusted Death Rate per 100,000 Population (18+)	61.3 ²
Joint Commission–certified Primary Stroke Centers	1 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke System of Care

The Hawaii Heart Disease and Stroke Prevention (HDSP) Program initiated a capacity assessment in 2010 to collect information on response, diagnosis, and treatment capabilities statewide for cardiac and stroke care in emergency department and hospital settings. The results of the survey are being used to establish recommendations to develop an integrated system of care, including services from primary prevention through rehabilitation.

Cardiovascular Disease State Plan

The Hawaii HDSP Program, in collaboration with pre-hospital and acute care stakeholders statewide, is working to identify objectives and strategies to improve the system of cardiac and stroke care in Hawaii as part of a comprehensive state plan.

Among many others, pre-hospital and acute care stakeholders include:

- Hawaii Department of Health.
- North Hawaii Outcomes Institute.
- Hawaii chapter of the American Heart Association/American Stroke Association.

The initiative's goal is to improve the quality of heart disease and stroke care through the development of a strategic plan that outlines objectives and intervention strategies based on existing surveillance data (mortality, prevalence of risk factors, hospitals and emergency departments). The acquisition of additional health care systems-level data is also a priority to have appropriate indicators for the plan, such as control of high blood pressure and high cholesterol.

Emergency Medical Services

In 2009, the Emergency Medical Services and Injury Prevention Systems Branch were reviewing county guidelines for transporting stroke patients to decide whether the guidelines should be updated to comply with national recommendations.

Notes

1. The information provided is current as of July 2010.
2. Hawaii ranked 22nd of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site.](#)
3. [The Joint Commission.](#)
4. CDC National Heart Disease and Stroke Prevention Program: [Hawaii.](#)
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	45 ²
Age-adjusted Death Rate per 100,000 Population (18+)	71.0 ²
Joint Commission–certified Primary Stroke Centers	1 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Partnerships

The Idaho Heart Disease and Stroke Prevention (HDSP) Program participated in the Northwest Regional Stroke Network, led by the Washington State HDSP Program and including HDSP Programs in Alaska, Montana, and Oregon. The network’s mission was to facilitate, through collaboration, equal access to high-quality stroke care throughout the Northwest. Network funding ended in June 2010.

Stroke Awareness

The governor of Idaho proclaimed May 2002 as Stroke Awareness Month and May 2007 as American Stroke Month.

Notes

1. The information provided is current as of July 2010.
2. Idaho ranked 45th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site.
3. The Joint Commission.
4. CDC National Heart Disease and Stroke Prevention Program: Idaho.
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention



State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	30 ²
Age-adjusted Death Rate per 100,000 Population (18+)	65.2 ²
Joint Commission–certified Primary Stroke Centers	49 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

In August 2009, the governor of Illinois signed Public Act 096-0514, the Primary Stroke Center Act, into law. The Act sets forth criteria for state-designated primary stroke centers. Hospitals seeking the designation from the state of Illinois would submit evidence of certification from a nationally recognized certifying body to the Illinois Department of Public Health (DPH). The Act also creates the State Stroke Advisory Subcommittee to advise DPH on designation of primary stroke centers.

Hospitals may also seek state designation as an emergent stroke ready hospital. The following criteria, as stated in the Act, qualify a hospital to receive this designation:

- Create written acute care protocols related to emergent stroke care.
- Maintain a written transfer agreement with one or more hospitals that have neurosurgical expertise.
- Designate a director of stroke care, which may be a clinical member of the hospital staff or the designee of the hospital administrator, to oversee the hospital's stroke care policies and procedures.
- Administer thrombolytic therapy, or subsequently developed medical therapies that meet nationally recognized, evidence-based stroke guidelines.
- Conduct brain image tests at all times.
- Conduct blood coagulation studies at all times.
- Maintain a log of stroke patients, which shall be available for review upon request by the Department or any hospital that has a written transfer agreement with the emergent stroke ready hospital.

Under the Act, DPH was given authority to provide grants for personnel and equipment to hospitals that seek primary stroke center status and show a financial need. The Department will also identify areas with high morbidity or substantial geographic distance from existing centers.

The Act charges the director of public health with:

- Preparing and submitting a report summarizing grant application and award statistics and keeping a statewide registry of primary stroke centers.
- Suspending or revoking a hospital's status as a primary stroke center if it no longer meets the designation criteria.

That same year, the Emergency Medical Services (EMS) Systems Act was amended to require the EMS Regional Plan to address "protocols for the triage, treatment, and transport of possible acute stroke victims."

Related State Policy and Initiatives⁵

Stroke Partnerships

The Illinois Heart Disease and Stroke Prevention (HDSP) Program led the Great Lakes Regional Stroke Network, which included HDSP Programs in Michigan, Minnesota, Ohio, and Wisconsin as well as the Indiana Department of Health. CDC funded the network to increase stroke awareness, prevention, and control activities within and across the region. Network funding ended in June 2010.

Stroke Registry

Illinois participated in the CDC-funded Paul Coverdell Stroke Registry pilot program in 2002. Illinois has been a Paul Coverdell National Acute Stroke Registry state since 2004. The registry's primary goal is to improve the care of acute stroke patients in Illinois hospitals through quality improvement in stroke care. Strategies range from rapid screening, diagnosis, and intervention for patients experiencing a stroke to secondary prevention measures—such as blood pressure control, quitting smoking, and treatment of high cholesterol—to reduce the incidence of recurrent stroke after leaving the hospital.

Stroke Task Force

In 2002, Illinois Senate Bill 2050 created a Stroke Task Force within the Illinois Department of Public Health (DPH). The task force helps the department set priorities for improving stroke prevention and treatment efforts in Illinois.

Public Health Education

Illinois also established an elementary and secondary school public health program. The program requires Illinois schools to provide education on a variety of health topics. It also encourages teachers and other school personnel to know how to perform CPR.

Heart Disease and Stroke State Plan

In 2007, DPH published a 2007–2012 state plan, Heart Disease and Stroke in Illinois: Now Is the Time for Public Health Action. The plan will guide efforts in Illinois to reduce heart disease and stroke and their associated costs.

Stroke Awareness

The Illinois General Assembly proclaimed May 2007 to be American Stroke Month and urged all the citizens to familiarize themselves with the warning signs, symptoms, and risk factors associated with stroke. Also in 2007, the Illinois House of Representatives proclaimed February 2007 and each February thereafter to be "Go Red for Women Month" to support women and the fight against heart disease and stroke.

Notes

1. The information provided is current as of July 2010.
2. Illinois ranked 30th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Illinois](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Indiana

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	39 ²
Age-adjusted Death Rate per 100,000 Population (18+)	69.1 ²
Joint Commission–certified Primary Stroke Centers	13 ³
CDC Heart Disease and Stroke Prevention Program Status	Not funded ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Partnerships

The Indiana Department of Health participated in the [Great Lakes Regional Stroke Network](#), which was led by the Illinois Heart Disease and Stroke Prevention (HDSP) Program and also included HDSP Programs in Michigan, Minnesota, Ohio, and Wisconsin. CDC funded the network to increase stroke awareness, prevention, and control activities within and across the region. Network funding ended in June 2010.

Stroke Task Force

The [Indiana Stroke Prevention Task Force](#) formed in 2004 through a public law to focus on a statewide comprehensive stroke needs assessment and public education for high-risk populations and geographic areas with a high incidence of stroke. The task force also:

- Recommended and disseminated guidelines for providers on emergency stroke care.
- Provided information on the most effective strategies for stroke prevention.
- Advised the Indiana Department of Health on grant opportunities for hospitals and emergency medical services (EMS) providers.

Expanded Task Force

In 2008, Indiana enacted [Senate Enrolled Act 336](#), which expanded the Stroke Prevention Task Force through 2012. The Act charged the task force with developing:

- A standardized stroke checklist for EMS protocols.
- A thrombolytic⁶ checklist for EMS.

- Standardized training for 9-1-1 dispatchers and continuing education for first responders, including implementation of the Cincinnati Stroke Scale.
- An integrated curriculum for EMS personnel, hospitals, first responders, physicians, and emergency room staff.
- A standard template of protocols that include thrombolytic treatment.
- A more refined hospital stroke assessment tool to determine the capability of hospitals to treat stroke patients.
- A stroke-survivor mentor program targeting survivors whose rehabilitation is complete.

The Act also charged the task force with:

- Researching the feasibility of a state-based primary stroke center certification program.
- Distributing the rehabilitation survey developed by the Great Lakes Regional Stroke Network throughout Indiana.
- Implementing a statewide patient and community education initiative targeting at-risk populations.
- Investigating the use of telemedicine in Indiana for the neurological and radiological treatment of stroke patients.

Notes

1. The information provided is current as of July 2010.
2. Indiana ranked 39th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. [CDC National Heart Disease and Stroke Prevention Program](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.
6. Thrombolytic treatment uses medication to break up a blood clot that is blocking the flow of blood in an artery.

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	35 ²
Age-adjusted Death Rate per 100,000 Population (18+)	66.7 ²
Joint Commission–certified Primary Stroke Centers	9 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Prevention and Chronic Care Management

In 2008, the Iowa General Assembly passed [House File 2474](#), which charged the director of public health with creating an advisory council for chronic disease prevention and management. The council will:

- Help develop a state initiative promoting evidence-based prevention and chronic care management strategies for public and private health care systems.
- Elicit input from health care providers and organizations, community and nonprofit groups, insurers, consumers, businesses, school districts, and state and local governments in making its recommendations.

Health Care Information Technology and Infrastructure Advisory Committee

The Iowa General Assembly also passed [House File 211](#) in 2008. The bill established a health care information technology and infrastructure advisory committee that assists the Iowa Department of Public Health in developing a health care information technology strategic plan. The plan will establish a state-wide health care information infrastructure within 10 years.

Stroke Awareness

The Iowa Senate recognized May 2007 as American Stroke Awareness Month and National High Blood Pressure Education Month and urged all citizens to react to stroke symptoms immediately and treat high blood pressure aggressively to reduce the devastating effects of stroke on the state's population.

Notes

1. The information provided is current as of July 2010.
2. Iowa ranked 35th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Iowa](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

For more information please contact Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30333
Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov
Web: www.cdc.gov

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	43 ²
Age-adjusted Death Rate per 100,000 Population (18+)	70.4 ²
Joint Commission–certified Primary Stroke Centers	6 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Commission on Health

In 2004, [House Bill 2116](#) established a Kansas Commission on Health to oversee sweeping changes in state laws and regulations to reduce health disparities, improve service to rural areas, and increase prevention and health promotion activities statewide.

Quality and Performance Indicators

[House Bill 2271](#), introduced in Kansas' 2007–2008 legislative session, requires health care providers to publicly disclose their quality and performance indicators for common health or medical care services, including stroke. Indicators include data on patient admission and release, the hospital emergency department, surgical outcomes, hospital-acquired infections, surgical complications, and readmissions.

Telemedicine

The Kansas Legislature also introduced [House Bill 2065](#), proposing health insurance coverage for telemedicine, in 2008. Although the bill is not directly related to stroke care, this type of care could improve as a result of telemedicine coverage.

Notes

1. The information provided is current as of July 2010.
2. Kansas ranked 43rd of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).

3. The Joint Commission.
4. CDC National Heart Disease and Stroke Prevention Program: Kansas.
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

For more information please contact Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30333
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Web: www.cdc.gov

Kentucky

PRIMARY STROKE CENTER POLICY



State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	37 ²
Age-adjusted Death Rate per 100,000 Population (18+)	68.2 ²
Joint Commission–certified Primary Stroke Centers	11 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

In 2004, Kentucky policymakers considered recognizing The Joint Commission as the official source of certification for primary stroke centers in [House Bill 542](#). However, the legislators did not vote on the bill.

In 2010, The Kentucky Legislature approved [Senate Bill 1](#), which requires the secretary of the cabinet for health and family services to designate as a primary stroke center any hospital that holds Joint Commission or other approved certification; suspend or revoke a designation if certification is withdrawn; permit certification by another cabinet-approved organization; and require that acute care hospitals comply with national standards and safety goals, use evidence-based clinical practice guidelines, and use an organized approach to measure performance.

Related State Policy and Initiatives⁵

Telemedicine

Kentucky funds a telehealth network that employs a standardized stroke system of care for users of the [RP-7 robot](#). This device, developed by the University of Louisville, uses broadband Internet connections and secured wireless servers to give stroke patients in rural emergency rooms access to neurosurgeons in urban partner hubs.

In addition, the University of Kentucky's Chandler Hospital, one of the state's certified primary stroke centers, developed the Kentucky [Telecare Program](#) and an associated [Center for Excellence in Rural Health](#), giving University of Kentucky patients access to physicians without having to drive to the physicians' offices in Lexington.

Notes

1. The information provided is current as of July 2010.
2. Kentucky ranked 37th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).



3. The Joint Commission.
4. CDC National Heart Disease and Stroke Prevention Program: Kentucky.
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

For more information please contact Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30333
Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov
Web: www.cdc.gov

Louisiana

PRIMARY STROKE CENTER POLICY

LA

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	41 ²
Age-adjusted Death Rate per 100,000 Population (18+)	70.3 ²
Joint Commission–certified Primary Stroke Centers	5 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Partnerships

The Louisiana Heart Disease and Stroke Prevention (HDSP) Program participated in the Delta States Stroke Consortium, led by the Arkansas HDSP Program and including HDSP Programs in Alabama, Mississippi, and Tennessee. The CDC-funded network increased stroke prevention activities in the region. Consortium funding ended in June 2010.

Stroke Prevention

The Louisiana Department of Health and Hospitals coordinates the [Louisiana HDSP Program](#). The program:

- Develops and coordinates partnerships.
- Defines the burden of heart disease and stroke.
- Keeps an inventory of policy and environmental strategies.
- Develops a statewide heart disease and stroke prevention plan.
- Provides training and technical assistance.
- Develops population-based strategies.
- Develops culturally competent strategies for priority populations.

Stroke Task Force

Louisiana passed [Senate Concurrent Resolution 20](#) in 2001 to create the Louisiana Stroke Treatment Task Force, which studies "...the feasibility of developing and implementing a comprehensive statewide education program on stroke prevention targeted to high-risk populations and to geographic areas where

there is a high incidence of stroke.” The task force was also charged with reporting on adopting and disseminating guidelines on the treatment of stroke patients, including emergency stroke care throughout the state, and determining what constitutes high-quality health care for stroke patients and health care providers. Task force authority expired in 2003.

The Louisiana Emergency Response Network Board was established in 2004 under [RS 40:2845](#). Among many other responsibilities, the Board works with the department to develop stroke and ST segment elevation myocardial infarction (STEMI) systems that are designed to promote rapid identification of and access to appropriate stroke and STEMI resources statewide.

Stroke Awareness

The Louisiana Legislature designated May 2007 as American Stroke Month in Louisiana and urged residents to familiarize themselves with the warning signs, symptoms, and risk factors associated with stroke to reduce the effects of the disease.

Notes

1. The information provided is current as of July 2010.
2. Louisiana ranked 41st of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Louisiana](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Maine

PRIMARY STROKE CENTER POLICY

MME

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	17 ²
Age-adjusted Death Rate per 100,000 Population (18+)	57.3 ²
Joint Commission–certified Primary Stroke Centers	3 ³
CDC Heart Disease and Stroke Prevention Program Status	Basic Implementation ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Emergency Dispatch Services

Public Law 42 mandates statewide implementation and ongoing evaluation of emergency medical dispatch services in Maine, which include protocols for stroke patients. All Maine dispatchers receive training and obtain licensure and must renew their licenses every two years.

Emergency Medical Services

Maine Emergency Medical Services (EMS), within the Maine Department of Public Safety, develops, implements, and regulates statewide EMS protocols. Prehospital treatment protocols for stroke include evaluation using a stroke scale. EMS personnel assess the patient’s condition based on a checklist and transmit the information to the receiving hospital if a thrombolytic agent⁶ is necessary.

In addition, Maine EMS implemented a statewide electronic data system, the Maine Ambulance Run Data System, to enhance the quality of EMS data collection, analyses, and use, which ultimately aims to improve patient care. The majority of local EMS services are now reporting into the system.

Quality Stroke Care

To “...promote statewide quality improvement and systems development specific to stroke care,” the Maine Cardiovascular Health Program (CHP) works directly with health care systems. The initiative involves the Stroke Care in Maine Workgroup, with representation from health care systems, hospitals, EMS, specialty providers, advocacy organizations, and public health groups.

HeartSafe Communities

The Maine HeartSafe Communities initiative “...promotes partnerships between EMS services and community partners to improve overall cardiovascular health and awareness.” Maine’s state and regional EMS offices and CHP developed criteria to improve:

- Emergency response capacity.
- Public knowledge of stroke and heart attack symptoms.
- Public awareness of the importance of calling 9-1-1 immediately in the case of stroke or heart attack.

HeartSafe designees and their community partners receive technical assistance and resources to help them improve cardiovascular health and disease outcomes.

State Health Plan

In April 2008, Maine issued its *2008–2009 State Health Plan*. Several aspects of the plan relate to stroke care, including plans for reconvening the Office of Rural Health and Primary Care telemedicine work-group. The plan also highlights the work of a task force to engage in and promote statewide initiatives for developing stroke systems of care.

Notes

1. The information provided is current as of July 2010.
2. Maine ranked 17th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#). Maine's only free-standing rehabilitation hospital has also achieved Joint Commission certification in stroke rehabilitation.
4. CDC National Heart Disease and Stroke Prevention Program: [Maine](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.
6. Thrombolytic treatment uses medication to break up a blood clot that is blocking the flow of blood in an artery.

Maryland

PRIMARY STROKE CENTER POLICY

MMD

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	20 ²
Age-adjusted Death Rate per 100,000 Population (18+)	59.6 ²
Joint Commission–certified Primary Stroke Centers	17 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Primary Stroke Center Designation

The Maryland Institute for Emergency Medical Services Systems (MIEMSS) designates primary stroke centers statewide. The Code of Maryland Regulations 30.08.11 provides for hospitals to receive primary stroke center designation if they have been accredited by The Joint Commission, have a stroke center director, and have undergone a review from MIEMSS. The Institute also has a protocol to allow EMS to transport patients with stroke symptoms to a primary stroke center instead of a non-designated center.

Stroke Council

In 2001, Maryland passed House Bill 492 and Senate Bill 330, renaming the State Advisory Council on High Blood Pressure and Related Cardiovascular Factors as the State Advisory Council on Heart Disease and Stroke. This legislation:

- Increased the membership of the council.
- Required the council to develop and promote educational programs on heart disease and stroke prevention, detection, and treatment targeted to high-risk populations and to high-incidence geographic areas.
- Charged the council to recommend that the Maryland Department of Health and Mental Hygiene establish guidelines for the effective management and treatment of heart disease and stroke including, but not limited to, therapy and long-term management.

Maryland legislators introduced but did not pass House Bill 263 and Senate Bill 234 in 2001. The legislation would have authorized the secretary of health and mental hygiene to design and implement statewide stroke prevention, early detection, and treatment programs.

Notes

1. The information provided is current as of July 2010.
2. Maryland ranked 20th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Maryland](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Massachusetts

PRIMARY STROKE CENTER POLICY

MMA

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	16 ²
Age-adjusted Death Rate per 100,000 Population (18+)	56.9 ²
Joint Commission–certified Primary Stroke Centers	5 ³
CDC Heart Disease and Stroke Prevention (HDSP) Program Status	Basic Implementation ⁴

Enacted State Primary Stroke Center Legislation

In 2009, Massachusetts Senate Bill 840 was pending. The bill would appropriate funding for a primary stroke center designation program for Massachusetts hospitals. The Joint Committee on Public Health requested a study of the proposed program prior to further action.

Related State Policy and Initiatives⁵

Primary Stroke Services Hospitals

The Massachusetts Department of Public Health (DPH) designates primary stroke services hospitals. The criteria for designation are based on recommendations from the Brain Attack Coalition.⁶

To be a designated primary stroke services hospital, the facility must:

- Submit an application to DPH indicating that it meets the appropriate standards.
- Offer laboratory services, have a director or coordinator who is a licensed physician with acute stroke experience, have a method for communicating with emergency medical services (EMS), have post-admission protocols, offer neuroimaging, other imaging and electrocardiogram services, and provide access to neurosurgical services.
- Have a quality improvement program.
- Provide continuing education for health professionals.
- Offer community education to promote stroke prevention.
- Have written care protocols for emergency treatment of patients, including acceptable use of medications.
- Be prepared to submit to a site visit.
- Renew its license every two years.

In addition, designated primary stroke services hospitals must collect data for use by a data management vendor, and are required to use approved EMS Regional Stroke Point-of-Entry Plans.



A survey of hospitals in the state, conducted by the DPH Bureau of Health Care Safety and Quality, found that only 27 of the 73 respondents said they were not interested in being designated as a primary stroke services hospital.⁶

Stroke Registry

Massachusetts participated in Wave I of the CDC-funded Paul Coverdell Stroke Registry pilot program in 2001. Massachusetts has been a [Paul Coverdell National Acute Stroke Registry](#) state since 2004. The registry's primary goal is to improve the care of acute stroke patients in Massachusetts hospitals through quality improvement in stroke care to reduce the incidence of recurrent stroke after leaving the hospital. The focus of the quality improvement efforts ranges from rapid screening, diagnosis, and treatment for patients experiencing a stroke to secondary prevention measures—such as blood pressure control, quitting smoking, and treatment of high cholesterol—to reduce the incidence of recurrent stroke after leaving the hospital.

Pre-Hospital Treatment Protocols

Massachusetts' [EMS Pre-Hospital Treatment Protocols](#) require that EMS providers:

1. Use the Massachusetts Stroke Scale to determine whether a patient is having a stroke.
2. Stabilize and transport the patient to the most appropriate facility.
3. Begin using the DPH point-of-entry plans.

Stroke Educational Initiatives

Prior work related to stroke and stroke centers in Massachusetts includes a Get With The Guidelines pilot program. In addition, Massachusetts has provided funds for a [statewide stroke education and public awareness system](#) since 2002.

Notes

1. The information provided is current as of July 2010.
2. Massachusetts ranked 16th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Massachusetts](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.
6. Dreyer P. Acute stroke care licensure: state-based centers with mandatory reporting and EMS patient rerouting. Presentation to the American Heart Association Quality of Care and Outcomes Research in Cardiovascular Disease and Stroke Conference 2007.

Michigan

PRIMARY STROKE CENTER POLICY



State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	24 ²
Age-adjusted Death Rate per 100,000 Population (18+)	67.2 ²
Joint Commission–certified Primary Stroke Centers	33 ³
CDC Heart Disease and Stroke Prevention (HDSP) Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Partnerships

The Michigan Heart Disease and Stroke Prevention (HDSP) Program participated in the [Great Lakes Regional Stroke Network](#), led by the Illinois HDSP Program and including HDSP Programs in Minnesota, Ohio, and Wisconsin as well as the Indiana Department of Health. CDC funded the network to increase stroke awareness, prevention, and control activities within and across the region. Network funding ended in June 2010.

Stroke Registry

Michigan participated in Wave I of the CDC-funded Paul Coverdell Stroke Registry pilot program in 2001. Michigan has been a [Paul Coverdell National Acute Stroke Registry](#) state since 2007. The registry's primary goal is to improve the care of acute stroke patients in Michigan hospitals through quality improvement in stroke care to reduce the incidence of recurrent stroke after leaving the hospital. The focus of the quality improvement efforts ranges from rapid screening, diagnosis, and treatment for patients experiencing a stroke to secondary prevention measures—such as blood pressure control, quitting smoking, and treatment of high cholesterol—to reduce the incidence of recurrent stroke after leaving the hospital.

Stroke Initiative

The [Michigan Stroke Initiative](#), an expert stroke advisory group, explores potential policy and legislative agendas for the state, including primary stroke center policy. The initiative began in 1997 and is supported by the Michigan Department of Community Health.



Stroke Prevention and Infrastructure Development

Michigan has passed several legislative initiatives to fund stroke prevention and stroke infrastructure development programs, most noticeably under the broad category of chronic diseases. In 2007, Michigan legislators introduced [Senate Bill 1094](#) to ensure that certain health care facilities could develop chronic disease prevention pilot programs.

Emergency Medical Services

Michigan is one of only four states that does not have a statewide trauma system, so the Michigan Department of Community Health collaborates with other agencies and providers on emergency medical services (EMS) policies and legislation that will impact trauma, stroke, heart attack, and perinatal care.

In 2007, Michigan received a grant from CDC to assess and improve EMS stroke and heart attack care. When the state updated its EMS stroke protocol in 2008, EMS assessment findings influenced some of the improvements, including increased promotion of primary stroke centers.

Telemedicine

The [Michigan Stroke Network](#) developed from one of the state's large health systems, Trinity Health. The network is comprised of 30 hospitals that use robots to transfer clinical and patient information between facilities.

Stroke Awareness

The Michigan Legislature designated May 2007 as Stroke Awareness Month to promote education about stroke risk factors, prevention, symptom recognition, and acting fast to treat stroke.

Notes

1. The information provided is current as of July 2010.
2. Michigan ranked 24th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Michigan](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Minnesota

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	19 ²
Age-adjusted Death Rate per 100,000 Population (18+)	59.1 ²
Joint Commission–certified Primary Stroke Centers	15 ³
CDC Heart Disease and Stroke Prevention (HDSP) Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Partnerships

The Minnesota Heart Disease and Stroke Prevention (HDSP) Program participated in the [Great Lakes Regional Stroke Network](#), led by the Illinois HDSP Program and including HDSP Programs in Michigan, Ohio, and Wisconsin as well as the Indiana Department of Health. CDC funded the network to increase stroke awareness, prevention, and control activities within and across the region. Network funding ended in June 2010.

The state continues to convene the Minnesota Stroke Partnership, a coalition of stroke experts collaborating to recommend and implement key strategies to reduce the burden of stroke in Minnesota.

Stroke Registry

Minnesota has participated in the CDC-sponsored [Paul Coverdell National Acute Stroke Registry](#) since 2007. The registry's primary goal is to improve the care of acute stroke patients in Minnesota hospitals through quality improvement in stroke care. Strategies range from rapid screening, diagnosis, and intervention for patients experiencing a stroke to secondary prevention measures—such as blood pressure control, quitting smoking, and treatment of high cholesterol—to reduce the incidence of recurrent stroke after leaving the hospital.

Stroke Prevention

The Minnesota Department of Health's Heart Disease and Stroke Prevention Unit conducts surveys on the system of stroke care within the state. [Reports](#) indicate that care varies across the state:

- Many hospitals do not have written protocols for stroke treatment.
- Urban and rural hospitals differ in the administration of tPA, the only FDA-approved medical treatment for ischemic strokes.

- Most emergency medical services providers have written protocols for transporting suspected stroke patients, but response and treatment standards are not universal or legislated.

Notes

1. The information provided is current as of July 2010.
2. Minnesota ranked 24th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Minnesota](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Mississippi

PRIMARY STROKE CENTER POLICY

MMS

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	46 ²
Age-adjusted Death Rate per 100,000 Population (18+)	73.3 ²
Joint Commission–certified Primary Stroke Centers	3 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Partnerships

The Mississippi Heart Disease and Stroke Prevention (HDSP) Program participated in the Delta States Stroke Consortium, led by the Arkansas HDSP Program and including HDSP Programs in Alabama, Louisiana, and Tennessee. CDC funded the network to increase stroke prevention activities in the region. Network funding ended in June 2010.

Stroke Task Force

The Mississippi Legislature enacted [House Bill 759](#) to create the Mississippi Task Force on Heart Disease and Stroke Prevention within the Mississippi Department of Health. The task force:

- Identified effective strategies for preventing and controlling risks for heart disease and stroke.
- Adopted and promotes the *Mississippi State Plan for Heart Disease and Stroke Prevention and Control 2004–2013*.
- Secured commitment to implement the plan from community partners.
- Helps state and local agencies and organizations get involved in achieving the aims of the plan.

Stroke Awareness

The Mississippi Legislature recognized May 2009 as Stroke and High Blood Pressure Awareness Month in the state.

Notes

1. The information provided is current as of July 2010.
2. Mississippi ranked 46th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Mississippi](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Missouri

PRIMARY STROKE CENTER POLICY



State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	41 ²
Age-adjusted Death Rate per 100,000 Population (18+)	70.3 ²
Joint Commission–certified Primary Stroke Centers	17 ³
CDC Heart Disease and Stroke Prevention Program Status	Basic Implementation ⁴

Enacted State Primary Stroke Center Legislation

In 2008, the Missouri House of Representatives passed House Bill 1790, which requires Missouri’s Department of Health and Senior Services (DHSS) to designate hospitals as stroke centers after proper application and review. The bill provides grounds for suspension or revocation of designation. The bill also requires:

- Emergency medical services (EMS) to transport patients who suffer a stroke to a stroke center. If this would delay treatment, EMS should transport the patient to the nearest facility to be stabilized before transfer to a stroke center.
- DHSS to conduct on-site facility reviews every five years.
- DHSS to provide public and professional education related to EMS and their use.

Related State Policy and Initiatives⁵

Emergency Medical Care

House Bill 1790 also converted Missouri’s current trauma system into a time critical diagnosis (TCD) emergency care system. The TCD system is a coordinated, integrated approach to providing emergency medical care for heart attack, stroke, and trauma victims. TCD systems focus on improving outcomes for patients.

DHSS and the Missouri Foundation for Health are working with experts to expand the framework for this new system. More than 100 medical experts from around Missouri participate in ongoing TCD work-groups, formulating detailed recommendations to improve the effectiveness of emergency medical care.

Heart Disease and Stroke Prevention State Plan

DHSS maintains an active Heart Disease and Stroke Partnership. The Missouri Plan for Heart Disease and Stroke Prevention 2005–2010 includes objectives to assess the state’s stroke systems and expand the 9-1-1 system.



Stroke Awareness

The Missouri General Assembly designated May 2006 as Stroke Awareness Month.

Notes

1. The information provided is current as of July 2010.
2. Missouri ranked 41st of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Missouri](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Montana

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	18 ²
Age-adjusted Death Rate per 100,000 Population (18+)	58.7 ²
Joint Commission–certified Primary Stroke Centers	3 ³
CDC Heart Disease and Stroke Prevention Program Status	Basic Implementation ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Partnerships

The Montana Heart Disease and Stroke Prevention (HDSP) Program participated in the Northwest Regional Stroke Network, led by the Washington State HDSP Program and including HDSP Programs in Alaska, Idaho, and Oregon. The CDC-funded network's mission was to facilitate, through collaboration, equal access to high-quality stroke care throughout the Northwest. Network funding ended in June 2010.

The Montana Department of Public Health and Human Services (DPHHS) also partners with the American Heart Association/American Stroke Association and state health care providers to promote better stroke care.

Cardiovascular Health Program

DPHHS maintains a Cardiovascular Health Program supported with funds from CDC and the state tobacco tax.

Heart Disease and Stroke Plan

Montana's Heart Disease and Stroke Plan 2006–2010 includes a goal aimed at improving the treatment and care of heart attack and stroke victims. Two objectives within this goal include:

- Increasing the number of Joint Commission–certified primary stroke centers in Montana.
- Increasing the use of tPA, the only FDA-approved medical treatment for ischemic stroke.

Stroke Initiative

The Montana Stroke Initiative includes the DPHHS Cardiovascular Health Program, the American Heart Association/American Stroke Association, and community partners throughout the state. Its mission is to develop a statewide stroke system of care that gives patients access to the best care regardless of where they live.

The initiative established a website to disseminate information to care providers, including access to telestroke support, which is funded by tobacco tax. The Guidelines section of the site features recommendations from the American Heart Association/American Stroke Association and National Institute of Neurological Disorders and Stroke.

Notes

1. The information provided is current as of July 2010.
2. Montana ranked 18th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site.](#)
3. [The Joint Commission.](#)
4. CDC National Heart Disease and Stroke Prevention Program: [Montana.](#)
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Nebraska

PRIMARY STROKE CENTER POLICY

NE

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	29 ²
Age-adjusted Death Rate per 100,000 Population (18+)	64.9 ²
Joint Commission–certified Primary Stroke Centers	7 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Treatment Survey

In 2006, the Nebraska Health and Human Services System published *An Assessment of Acute Stroke Treatment in Nebraska Hospitals*, a survey on the state's system of care. The purpose of the study was to maximize access to stroke care. The authors found that 75 percent of Nebraska hospitals were "...ready or near-ready to treat acute stroke."

Emergency Medical Services

The *Nebraska Heart Disease and Stroke State Plan 2007–2012* includes several objectives for improving emergency medical services (EMS) for stroke, including:

- Establishing statewide guidelines for transportation of stroke patients to the nearest stroke-ready facility.
- Classifying suspected stroke as a high-priority medical emergency.
- Adopting a statewide tool for evaluating a suspected stroke patient.
- Improving coordination and communication between EMS and hospitals.

Notes

1. The information provided is current as of July 2010.
2. Nebraska ranked 29th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).

4. CDC National Heart Disease and Stroke Prevention Program: [Nebraska](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

For more information please contact Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30333
Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov
Web: www.cdc.gov

Nevada

PRIMARY STROKE CENTER POLICY



State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	5 ²
Age-adjusted Death Rate per 100,000 Population (18+)	49.5 ²
Joint Commission–certified Primary Stroke Centers	9 ³
CDC Heart Disease and Stroke Prevention Program Status	Not funded ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Systems of Care

In 2005, the Nevada Legislature passed [File Number 39](#), which called upon public and private organizations to "...work together to establish a cohesive statewide system of care for all residents of this State who suffer from strokes."

Nevada has pursued a number of regional efforts for systems of stroke care:

- The Southern Nevada Health District, which includes Las Vegas, is [developing plans](#) to help hospitals get certified as primary stroke centers by The Joint Commission.
- The Washoe Comprehensive Stroke Center of Renown Hospital in Reno is coordinating a [system of stroke care](#) in northern Nevada's Washoe Health System and the 25 rural hospitals it includes. The health system advocates using telemedicine and leveraging proximity to Northern California to reach underserved areas.

Chronic Disease Program

The Nevada Department of Health and Human Services maintains a [Chronic Disease Program](#) aimed at reducing cardiovascular disease risk factors, such as smoking, obesity, and physical inactivity. In 2006, the Department published the [Cardiovascular Disease Profile](#).

Notes

1. The information provided is current as of July 2010.
2. Nevada ranked 5th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).



3. The Joint Commission.
4. CDC National Heart Disease and Stroke Prevention Program.
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

For more information please contact Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30333
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E-mail: cdcinfo@cdc.gov
Web: www.cdc.gov

New Hampshire

PRIMARY STROKE CENTER POLICY



State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	5 ²
Age-adjusted Death Rate per 100,000 Population (18+)	49.5 ²
Joint Commission–certified Primary Stroke Centers	1 ³
CDC Heart Disease and Stroke Prevention Program Status	Not funded ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Risk Factors

New Hampshire's primary focus for stroke prevention is on reducing risk factors. The [New Hampshire Department of Health and Human Services](#) (DHHS) works with private and public groups throughout the state to educate residents about health issues and to promote the reduction of risk factors that lead to chronic diseases.

Healthy Lifestyles

In 2001, DHHS established the [Healthy New Hampshire 2010](#) initiative aimed at promoting healthy lifestyles. The Department identified targets in key risk factor areas, including stroke.

The Healthy New Hampshire 2010 initiative recently transitioned into a grassroots program, the [NH Citizens Health Initiative](#). This new program focuses on lowering the incidence of the leading causes of illness and death among New Hampshire citizens, including stroke. The initiative will use collaboration, scientific evidence, and policy recommendations to strengthen the public health system and improve the health and well-being of all New Hampshire residents.

Notes

1. The information provided is current as of July 2010.
2. New Hampshire ranked 5th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).



4. [CDC National Heart Disease and Stroke Prevention Program](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

For more information please contact Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30333
Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov
Web: www.cdc.gov

New Jersey

PRIMARY STROKE CENTER POLICY

NJ

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	11 ²
Age-adjusted Death Rate per 100,000 Population (18+)	51.5 ²
Joint Commission–certified Primary Stroke Centers	31 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

On November 1, 2004, New Jersey legislators passed [Bill S477](#), called the Stroke Center Act. The Act directs the New Jersey Department of Health and Senior Services (DHHS) to develop criteria for designating hospitals as primary stroke centers or comprehensive stroke centers. These criteria are based on the standards recommended by the Brain Attack Coalition.

Under the Act, primary stroke centers must:

- Maintain a stroke team.
- Be available 24 hours a day, 7 days a week, within 15 minutes of patient arrival at the hospital.
- Maintain written protocols for assessing and treating stroke.
- Have medical personnel trained in the treatment of stroke.
- Maintain facilities and services for stroke treatment and rehabilitation.
- Have a written transfer agreement with a comprehensive stroke center for more complicated stroke cases.

The Act requires comprehensive stroke centers to meet the primary stroke center criteria and to:

- Maintain advanced neurological and imaging services.
- Maintain comprehensive rehabilitation services.
- Have written agreements with primary stroke centers who have the capacity to accept more complicated stroke cases.
- Conduct stroke-related research.

The Act also established a grant program for hospitals seeking [designation](#) as a primary or comprehensive stroke center. As of July 2010, DHHS has designated 49 primary stroke centers and 12 comprehensive stroke centers.



Related State Policy and Initiatives⁵

Stroke Registry

In 2006, DHHS proposed a new rule that applied to all licensed general hospitals seeking designation as either a primary stroke center or a comprehensive stroke center. The rule requires a designated stroke center to maintain a database to support the evaluation of outcomes and continuous quality improvement. The Department collects stroke services data and acts as the data repository to evaluate outcomes and provide summary data on stroke services.

Notes

1. The information provided is current as of July 2010.
2. New Jersey ranked 11th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [New Jersey](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

New Mexico

PRIMARY STROKE CENTER POLICY



State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	7 ²
Age-adjusted Death Rate per 100,000 Population (18+)	50.1 ²
Joint Commission–certified Primary Stroke Centers	2 ³
CDC Heart Disease and Stroke Prevention Program Status	Not Funded ⁴

Enacted State Primary Stroke Center Legislation

In 2005, Senate Bill 190 provided funds to the New Mexico Department of Health (DOH) to improve treatment for stroke patients. The funding was to:

- Establish stroke centers in hospitals statewide.
- Create stroke prevention and treatment protocols.
- Implement a public awareness campaign.
- Establish a stroke registry.

Related State Policy and Initiatives⁵

Stroke Task Force

In 2003, DOH established the New Mexico Stroke Task Force to:

- Examine stroke prevention and treatment in the state.
- Increase stroke awareness.
- Increase access to stroke care and treatment.
- Develop a system of stroke care, including designation of stroke care centers.

In 2004, the task force's final report included a recommendation to establish primary stroke centers in hospitals likely to meet The Joint Commission's criteria. These hospitals, located in Albuquerque, Farmington, Santa Fe, and Las Cruces, would put half of the state's population within one hour of a primary stroke center.

Stroke Awareness

The New Mexico Legislature recognized February 5, 2003, as Stroke Awareness Day. In recognition of the importance of the ongoing fight against heart disease and stroke, February 1, 2008, was proclaimed Wear Red Day.



Notes

1. The information provided is current as of July 2010.
2. New Mexico ranked 7th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. [CDC National Heart Disease and Stroke Prevention Program](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

New York

PRIMARY STROKE CENTER POLICY

NY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	1 ²
Age-adjusted Death Rate per 100,000 Population (18+)	42.5 ²
Joint Commission–certified Primary Stroke Centers	12 ³
CDC Heart Disease and Stroke Prevention Program Status	Basic Implementation ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Center Designation

In February 2005, the New York State Department of Health (DOH) announced that it would establish stroke centers statewide "...to improve the standard and access to quality care for patients with a presumptive diagnosis of stroke." As of mid-2010, DOH had designated 119 hospitals as stroke centers. Designated stroke centers must:

- Communicate their new designation as a stroke center to the emergency medical services (EMS) community.
- Conduct and support EMS continuing medical education for stroke.

Emergency Medical Services Protocol

In 2004, New York's emergency medical council and advisory committee approved a revised suspected stroke protocol. The revised protocol requires:

- EMS providers to transport stroke patients to a designated stroke center, but only if the patient can arrive within two hours of the onset of symptoms. Otherwise, EMS providers should transport patients to a closer community hospital.
- EMS personnel to notify the stroke center of the transport.

Telemedicine

DOH developed the Rural Hospital Telemedicine/Telestroke Initiative to provide rural hospitals with access to stroke/neurology services through telemedicine.

The initiative uses REACH (Remote Evaluation of Acute Ischemic Stroke), a Web-based system developed at the Medical College of Georgia. REACH allows New York physicians to consult with neurologists in other states and improve treatment for stroke patients.

Notes

1. The information provided is current as of July 2010.
2. New York ranked 1st of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [New York](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

North Carolina

PRIMARY STROKE CENTER POLICY

NC

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	44 ²
Age-adjusted Death Rate per 100,000 Population (18+)	70.5 ²
Joint Commission–certified Primary Stroke Centers	23 ³
CDC Heart Disease and Stroke Prevention Program Status	Basic Implementation ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Heart Disease and Stroke Awareness

In 2009, Senate Bill 278 was pending in North Carolina. The bill would have appropriated funds for heart disease and stroke awareness and designated funds for the Stroke Advisory Council (see below) to study primary stroke center certification. It was referred to the Appropriations Committee, but funds were not included in the final appropriation.

Stroke Partnerships

The North Carolina Heart Disease and Stroke Prevention (HDSP) Program participated in the Tri-State Stroke Network, which also included HDSP Programs in Georgia and South Carolina. The CDC-funded network's mission was to support stroke prevention and control by:

1. Increasing public awareness of the signs and symptoms of stroke as well as the need to treat stroke as a medical emergency.
2. Addressing the geographic disparity in stroke deaths in the Tri-State area.

Network funding ended in June 2010.

Stroke Registry

North Carolina participated in Wave II of the CDC-funded Paul Coverdell Stroke Registry pilot program in 2002. North Carolina has been a Paul Coverdell National Acute Stroke Registry state since 2004.

The registry's primary goal is to improve the care of acute stroke patients in North Carolina hospitals through quality improvement in stroke care. Strategies range from rapid screening, diagnosis, and intervention for patients experiencing a stroke to secondary prevention measures—such as blood pressure control, quitting smoking, and treatment of high cholesterol—to reduce the incidence of recurrent stroke after leaving the hospital.



Emergency Medical Services

The North Carolina Administrative Code 13P.0201, last amended in January 2009, allows for each emergency medical services (EMS) system to develop transport procedures for patients with time-dependent issues, such as stroke, and those procedures may require bypass of licensed facilities to facilities with expanded clinical capacities.

Stroke Task Force and Council

The Justus-Warren Heart Disease and Stroke Prevention Task Force was established in 1995. In 2005, North Carolina House Bill 1860 established a Stroke Advisory Council to advise the task force on a statewide system of stroke care, including identifying and distributing information about primary stroke center locations.

The Stroke Advisory Council's first recommendations called for:

- Creating a network of stroke care systems.
- Developing a public awareness campaign about stroke warning signs, stroke symptoms, and the need for immediate response.
- Matching existing federal funds so as to boost hospital participation in the North Carolina Collaborative Stroke Registry.
- Creating professional workforce development training and communication initiatives.
- Surveying and assessing stroke prevention and treatment services in North Carolina.

In 2008, additional funding through House Bill 2436 sought to:

- Expand the Stroke Advisory Council to address issues related to establishing a coordinated system of stroke care for North Carolina.
- Identify stroke rehabilitation services and resources and establish a means of providing information about stroke rehabilitation services and programs to health care providers and the public.

Notes

1. The information provided is current as of July 2010.
2. North Carolina ranked 44th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [North Carolina](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

North Dakota

PRIMARY STROKE CENTER POLICY



State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	50 ²
Age-adjusted Death Rate per 100,000 Population (18+)	77.5 ²
Joint Commission–certified Primary Stroke Centers	2 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

House Bill 1339, effective January 1, 2010, authorizes North Dakota’s Department of Health (DOH) to “... designate qualified hospitals as primary stroke centers.” Under the bill, a hospital must apply to DOH and demonstrate that it meets certain criteria to be identified as a primary stroke center. The bill allows DOH to:

- Require Joint Commission certification as a prerequisite to receiving DOH recognition.
- Suspend or revoke a hospital’s primary stroke center designation if at any point it no longer meets the Department’s guidelines.

The bill requires DOH to:

- Post a list of hospitals designated as primary stroke centers.
- Adopt a standardized stroke assessment tool.
- Establish a stroke system of care task force, which would make recommendations for a state system of care. Topics for recommendations would include:
 - Rural care.
 - Protocols for treatment by emergency medical services providers that may include bypass to primary stroke centers.
 - A coordination plan for rural hospitals, primary stroke centers, and other health care providers.

Related State Policy and Initiatives⁵

Cardiovascular Disease Report

In 2007, DOH issued *The Burden of Cardiovascular Disease in North Dakota*. The report noted that only 4 of North Dakota’s 53 counties have cardiovascular specialists, and 60 percent of counties are designated as medically underserved areas.



Notes

1. The information provided is current as of July 2010.
2. North Dakota ranked 50th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [North Dakota](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	26 ²
Age-adjusted Death Rate per 100,000 Population (18+)	63.9 ²
Joint Commission–certified Primary Stroke Centers	33 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵**Stroke Partnerships**

The Ohio Heart Disease and Stroke Prevention (HDSP) Program participated in the Great Lakes Regional Stroke Network, led by the Illinois HDSP Program and including HDSP Programs in Michigan, Minnesota, and Wisconsin as well as the Indiana Department of Health. The network was funded to increase stroke awareness, prevention, and control activities within and across the region. Network funding ended in June 2010.

Stroke Registry

Ohio participated in Wave I of the CDC-funded Paul Coverdell Stroke Registry pilot program in 2001. Ohio has been a Paul Coverdell National Acute Stroke Registry state since 2007. The registry's primary goal is to improve the care of acute stroke patients in Ohio hospitals through quality improvement in stroke care. Strategies range from rapid screening, diagnosis, and intervention for patients experiencing a stroke to secondary prevention measures—such as blood pressure control, quitting smoking, and treatment of high cholesterol—to reduce the incidence of recurrent stroke after leaving the hospital.

Stroke Awareness

In 2005, the month of February was designated as American Heart Month to raise awareness of the seriousness of cardiovascular disease and the incidence in this state of heart disease and stroke. In 2007, Ohio designated September as Brain Aneurysm Awareness Month.

Stroke Prevention and Education

In 2000, the General Assembly of Ohio passed House Bill 642 to establish the Council on Stroke Prevention and Education within the Ohio Department of Health. The Council focuses on developing and implementing a comprehensive statewide public education program on stroke prevention. The

program targets high-risk populations and geographic areas with a high incidence of stroke.

The council has gathered information for physicians and other health care personnel that addresses:

- Risk factors for stroke.
- Screening for risk factors.
- Early signs of stroke.
- Strategies for initial treatment, long-term treatment, and rehabilitation for stroke patients.

The council produced a report for the Ohio governor describing its actions and recommendations. The group meets annually to review and revise its recommendations.

Telemedicine

In 2008, the Ohio HDSP Program received additional funding from CDC to develop stroke telemedicine networks in two regions of the state. The new networks will link small hospitals in rural counties to a primary stroke center.

Notes

1. The information provided is current as of July 2010.
2. Ohio ranked 26th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Ohio](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Oklahoma

PRIMARY STROKE CENTER POLICY

OK

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	48 ²
Age-adjusted Death Rate per 100,000 Population (18+)	74.2 ²
Joint Commission–certified Primary Stroke Centers	8 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

In 2008, Oklahoma passed [Senate Bill 1420](#). Under the bill, the Oklahoma Department of Health (DOH) will grant primary stroke center status to any hospital that meets the state’s criteria. The Joint Commission’s certification is not required for designation.

The designation criteria include:

- A stroke team with specific treatment protocols and physicians trained to care for stroke patients.
- An emergency services director and neurologists.
- Diagnostic imaging and clinical laboratory services.
- Written transfer agreements defining whether a stroke patient is transferred to another facility or remains at the hospital for treatment.
- A quality-improvement process providing regular feedback to the hospital and to regulating agencies.

The bill also requires standardized and shared stroke information between health centers and development of a statewide coordinated system of stroke care. The system focuses on timely access to care, diagnosis, and advanced treatment for groups with historically high risk of stroke.

In June 2009, Oklahoma passed a regulation codifying the classification of primary stroke centers and detailing the certification and registry processes for stroke.

Related State Policy and Initiatives⁵

Emergency Medical Services

In 2008, DOH developed a policy to allow emergency medical services (EMS) providers to bypass local hospitals and transport stroke patients to the closest primary stroke center.

Stroke Prevention

In 2008, DOH launched a new educational program called Act FAST! (**F**ace droop, **A**rm drift down, **S**peech slurred, **T**ime to call 9-1-1).

Also in 2008, Oklahoma's Senate Concurrent Resolution 93 supported the American Heart Association/American Stroke Association's Power to End Stroke campaign, which targets African Americans and promoted an event called Gospel Fest at the end of May. The resolution also designated May as American Stroke Month.

Telemedicine

The University of Oklahoma Medical Center (a Joint Commission–certified primary stroke center) has developed a Center for Telemedicine in conjunction with Oklahoma State University and the Oklahoma Center for the Advancement of Science and Technology.

Emergency Treatment Rules

In June 2008, the Oklahoma State Board of Health adopted *Primary Stroke Center Rules for Emergency Treatment*. The rules categorize facilities that can tell the difference between a blocked artery stroke or a bleeding artery stroke.

Stroke Awareness

The Oklahoma State Legislature declared May 2006 as Stroke Awareness Month.

Notes

1. The information provided is current as of July 2010.
2. Oklahoma ranked 48th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Oklahoma](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	40 ²
Age-adjusted Death Rate per 100,000 Population (18+)	69.4 ²
Joint Commission–certified Primary Stroke Centers	9 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Partnerships

The Oregon Heart Disease and Stroke Prevention (HDSP) Program participated in the Northwest Regional Stroke Network, led by the Washington State HDSP Program and including HDSP Programs in Alaska, Idaho, and Montana. The CDC-funded network’s mission was to facilitate, through collaboration, equal access to high-quality stroke care throughout the Northwest. Network funding ended in June 2010.

Stroke Registry

Oregon participated in Wave II of the CDC-funded Paul Coverdell Stroke Registry pilot program in 2002; it is not a current participant in the Paul Coverdell National Acute Stroke Registry.

Stroke Prevention

The Oregon Legislative Assembly has created resolutions about stroke awareness intermittently since 1999, when Senate Joint Memorial 5 described the need for more resources for stroke prevention.

Rural Collaborative

The Oregon HDSP Program sponsors the Heart Disease and Diabetes Rural Collaborative, a pilot program for enhancing the quality of care for rural patients with cardiovascular disease, including stroke.

State Stroke Plan

The Oregon HDSP Program collaborated with the Oregon Coordinating Council for Heart Disease and Stroke Prevention and Care to develop and disseminate Oregon’s Statewide Plan for Heart Disease and Stroke Prevention and Care. The plan is a call to action to improve prevention and care for heart disease and stroke in Oregon.

Stroke Awareness

The Oregon Legislative Assembly designated February 4, 2005, as Wear Red for Women Day to recognize the importance of knowing the risk factors and the warning signs of heart attack and stroke.

Notes

1. The information provided is current as of July 2010.
2. Oregon ranked 40th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Oregon](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Pennsylvania

PRIMARY STROKE CENTER POLICY

PA

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	28 ²
Age-adjusted Death Rate per 100,000 Population (18+)	64.8 ²
Joint Commission–certified Primary Stroke Centers	39 ³
CDC Heart Disease and Stroke Prevention Program Status	Not funded ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Advisory Committee

In 2009, [Senate Bill 137](#) proposed the establishment of a Cardiovascular Disease Advisory Committee as well as a state-level stroke database. The Committee would provide recommendations to the Pennsylvania Department of Health on best practices to prevent stroke and cardiovascular disease. The bill did not create a procedure for primary stroke center designation and did not pass.

Stroke Awareness and Prevention

The General Assembly of Pennsylvania has recognized stroke through multiple actions. May 2005 was recognized as Stroke Awareness Month. In 2007, [Senate Resolution 117](#) formally supported the American Heart Association/American Stroke Association's Power to End Stroke campaign. The resolution urged Pennsylvania residents to learn the warning signs, symptoms, and risk factors associated with stroke. The General Assembly also established March 2007 as Brain Injury Awareness Month, a day in May 2009 and 2010 as Childhood Stroke Awareness Day, and May 2010 as American Stroke Month. A Wear Red for Women Day on Feb 1, 2008, recognized the importance of heart disease and stroke in women.

Notes

1. The information provided is current as of July 2010.
2. Pennsylvania ranked 28th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. [CDC National Heart Disease and Stroke Prevention Program](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention



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Rhode Island

PRIMARY STROKE CENTER POLICY



State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	3 ²
Age-adjusted Death Rate per 100,000 Population (18+)	47.9 ²
Joint Commission–certified Primary Stroke Centers	4 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

The Stroke Prevention and Treatment Act of 2009 authorizes the Rhode Island Department of Health (DOH) to designate a hospital as a primary stroke center if it has attained Joint Commission certification or certification from another nationally recognized body. The Act requires the DOH Emergency Medical Services (EMS) Division to maintain and make publicly available an annual list of currently certified primary stroke centers. It also calls for the establishment of transport protocols that may include transport to the closest primary stroke center.

Related State Policy and Initiatives⁵

Stroke Partnerships

The Rhode Island Stroke Coordinators Network is providing a mechanism “for sharing information and data ... on ways to improve the quality of care.” The Network is open to all Rhode Island acute care hospitals and public health partners. The preliminary mission of the group is to build a statewide community for stroke coordinators to improve patient care statewide. The group has identified collaboration, communication, and education as the preliminary areas of focus.

Stroke Task Force

In 2004, the Rhode Island General Assembly established a Stroke Task Force to examine stroke care in Rhode Island as well as other stroke systems of care. The task force recommendations included:

- Establishment of a statewide stroke system of care, consistent with current nationally accepted guidelines, with oversight by DOH, including a process for designation of primary stroke centers by DOH, allowing for accreditation through an outside organization such as The Joint Commission.
- A public education campaign.
- Training for EMS dispatchers on stroke-specific guidance and processes to ensure compliance.
- Data collection and analysis mechanisms that allow DOH to monitor patient outcomes and ensure compliance with accepted treatment guidelines.



- Integrating post-stroke rehabilitative care into the state's stroke care system. A standardized screening and assessment tool should be employed to measure functional status during post-stroke rehabilitative care.

The task force also outlined potential obstacles to establishing a statewide system, including:

- DOH's limited resources.
- Lack of EMS provider funding and coordination.
- Potential reluctance by hospitals to lose revenue through diverting patients to primary stroke centers.

The American Heart Association/American Stroke Association worked with the task force to draft recommendations for designating primary stroke centers based on criteria from The Joint Commission. The task force met in January 2009 to work on implementing the recommendations, with a focus on primary stroke center designation and revision of the [EMS Prehospital Care Protocol and Standing Orders](#) for stroke patients. These efforts resulted in the development and passage of the Stroke Prevention and Treatment Act of 2009.

Stroke Protocols

In alignment with the [2009 legislation](#), Rhode Island EMS is adding a list of certified primary stroke centers to the EMS Stroke Protocol using the same model currently found in the state's ST Elevated Myocardial Infarction (STEMI) and EMS Trauma Protocols. In addition, the Stroke Task Force will update the "pre-hospital protocols related to the assessment, treatment, and transport of stroke patients" and present proposed revisions to the Ambulance Service Advisory Board for consideration. Rhode Island EMS will disseminate the final updated protocols to EMS providers via the DOH Web site and a mailing to all licensed ambulance services and hospital emergency departments.

Notes

1. The information provided is current as of July 2010.
2. Rhode Island ranked 3rd of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Rhode Island](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

South Carolina

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	38 ²
Age-adjusted Death Rate per 100,000 Population (18+)	68.9 ²
Joint Commission–certified Primary Stroke Centers	9 ³
CDC Heart Disease and Stroke Prevention Program Status	Basic Implementation ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Partnerships

The South Carolina Heart Disease and Stroke Prevention (HDSP) Program participated in the Tri-State Stroke Network, which also included HDSP Programs in Georgia and North Carolina. The CDC-funded network's mission was to support stroke prevention and control by:

1. Increasing public awareness of the signs and symptoms of stroke as well as of the need to treat stroke as a medical emergency.
2. Addressing the geographic disparity in stroke deaths in the Tri-State area.

Network funding ended in June 2010

Stroke Systems of Care Study

In 2008, House Joint Resolution 4928 established the Stroke Systems of Care Study Committee to develop a plan for a statewide stroke system of care. The plan would include:

- A description of effective prevention, treatment, and rehabilitation of stroke through a standardized system using best patient care practices.
- An urgent response system to provide appropriate care to stroke patients within 90 minutes of the onset of stroke to reduce risk for lifelong disability.
- A data system to monitor stroke incidence and prevalence data.
- Public education programs.

- Strategies to reduce stroke disparities among minority, rural, uninsured, and underinsured populations.
- Recommendations for policy changes, including funding, definition of a stroke center, program development, and state standards of stroke care.

The resolution proposed that an appropriate stroke system of care would include:

- Primary prevention.
- Community education.
- Notification and response of emergency medical services.
- Stroke treatment.
- Continuous quality improvement.

The study committee was charged with creating a plan for a statewide stroke system of care based on The Joint Commission's primary stroke center model.

Stroke Awareness

In 2003, the members of the South Carolina Senate and House of Representatives designated May 2003 as Stroke Awareness Month. A concurrent resolution designates May 2010 as Childhood Stroke Awareness Month.

Notes

1. The information provided is current as of July 2010.
2. South Carolina ranked 38th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [South Carolina](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

South Dakota

PRIMARY STROKE CENTER POLICY



State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	34 ²
Age-adjusted Death Rate per 100,000 Population (18+)	66.3 ²
Joint Commission–certified Primary Stroke Centers	3 ³
CDC Heart Disease and Stroke Prevention Program Status	Not funded ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Prevention

The South Dakota Department of Health (DOH) has a [Heart Disease and Stroke Prevention Program](#) that provides information about healthier lifestyles and reducing stroke risk factors. DOH's 2010 Initiative had three objectives aimed at reducing chronic diseases, including stroke:

- Enhancing data collection for chronic diseases.
- Improving the encouragement of healthy lifestyles.
- Promoting the Healthy South Dakota Initiative to help South Dakotans be physically active, eat healthy, and live healthier lives.

Emergency Medical Services

South Dakota has adopted the [Stroke Rapid Response Program](#) for training emergency medical services (EMS) providers. DOH issues [Basic Life Support Pre-Hospital Treatment Protocols](#) for EMS providers.

Notes

1. The information provided is current as of July 2010.
2. South Dakota ranked 34th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. [CDC National Heart Disease and Stroke Prevention Program](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention



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Tennessee

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	46 ²
Age-adjusted Death Rate per 100,000 Population (18+)	73.3 ²
Joint Commission–certified Primary Stroke Centers	12 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Primary Stroke Centers

In collaboration with the Tennessee Hospital Association and the American Heart Association/American Stroke Association, the Tennessee Heart Disease and Stroke Prevention (HDSP) Program implements a project to increase the number of The Joint Commission–certified primary stroke centers in the state.

Stroke Partnerships

The Tennessee HDSP Program participated in Delta States Stroke Consortium, led by the Arkansas HDSP Program and including HDSP Programs in Alabama, Louisiana, and Mississippi. The network was funded to increase stroke prevention activities in the region. Network funding ended in June 2010.

Stroke Registry

In 2008, the Tennessee General Assembly passed [Senate Bill 4011](#) to create a comprehensive stroke registry following the American Heart Association/American Stroke Association's Get With The Guidelines criteria. East Tennessee State University's College of Public Health operates the registry.

Stroke Awareness, Education, and Care

In 1998, legislators amended the Tennessee Code to create the [Strike Out Stroke Project](#). The project promotes public and professional education on the causes of cardiovascular disease and stroke, including high blood pressure and obesity.

In 2001, the Tennessee General Assembly passed [Senate Bill 690](#), establishing a stroke care, education, and outreach collaborative in each of the three major regions of the state. The bill also required that one hospital in each region be designated a Center for Stroke Care Excellence. Under the bill, the Tennessee Department of Health would work respectively with the Regional Medical Center at Memphis Hospital, Vanderbilt University Hospital, and Erlanger Medical Center to implement the collaboratives.

In 2005, legislators passed [Senate Joint Resolution 103](#), describing the intent to establish an integrated stroke care system in Tennessee.

A 2008 joint resolution designates the month of May as American Stroke Month in Tennessee.

Stroke Advisory Groups

The Tennessee HDSP Program has formed an HDSP Advisory Council, Stroke Systems of Care Task Force, and Cardiac Systems of Care Task Force with representatives from public and private health care organizations, businesses, academia, faith-based organizations, and minority communities.

Telemedicine

The Tennessee HDSP Program is working with Vanderbilt University Hospital and the Stroke Systems of Care Task Force to design a stroke telemedicine project. Stroke telemedicine services will help prevent long travel times for stroke patients by giving physicians in remote areas immediate electronic access to specialists in urban hubs.

Notes

1. The information provided is current as of July 2010.
2. Tennessee ranked 46th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Tennessee](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	31 ²
Age-adjusted Death Rate per 100,000 Population (18+)	65.3 ²
Joint Commission–certified Primary Stroke Centers	63 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

In 2005, the Texas Legislature enacted Senate Bill 330, which created a stroke committee under the Governor’s Emergency Medical Services (EMS) and Trauma Advisory Council (GETAC) to create a stroke emergency transport plan and stroke facility criteria. The committee was to consult the criteria for stroke facilities established by national medical organizations, such as The Joint Commission.

In 2007, GETAC’s stroke committee provided recommendations for three stroke center levels:

1. Comprehensive stroke centers.
2. Primary stroke centers.
3. Support stroke facilities.

The requirements for primary stroke centers include:

- Ability to deliver stroke treatment, neuroimaging, and laboratory services 24 hours a day, 7 days a week.
- A 24-hour stroke team in a dedicated stroke unit.
- Written care protocols.
- EMS agreements and trained emergency department personnel.
- A stroke center director who is a physician.
- Neurosurgical, neurological, and medical support services.
- An outcomes and quality improvement plan.
- An annual stroke continuing education requirement.
- A public education program.

In 2009, Texas adopted a regulation detailing a three-tier primary stroke center designation schema. Hospitals must be certified through The Joint Commission or a similar body to seek designation through the state. The regulation included a provision in the stroke system plan for bypass protocols through which patients who are eligible within the time frame for approved stroke care therapies were to be transported to the highest state designated stroke center.

Related State Policy and Initiatives⁵

Cardiovascular Health

The Cardiovascular Disease and Stroke Program is the primary program for heart disease and stroke prevention in Texas. The program develops policy for primary stroke centers, strategies to reduce stroke risk factors, and stroke systems of care. The program's Stroke Systems of Care Initiative includes four components:

1. Stroke committees in Regional Advisory Councils.
2. Stroke transport protocols.
3. EMS training.
4. Stroke centers within hospitals.

Cardiovascular Disease and Stroke Council

In 1999, the Texas Legislature passed House Bill 2085, establishing the Texas Council on Cardiovascular Disease and Stroke. The council's responsibilities include:

- Outreach about primary and secondary prevention of cardiovascular disease and stroke.
- Identifying for community groups the benefits of encouraging treatment, primary and secondary prevention, and public awareness of cardiovascular disease and stroke.
- Recognizing innovative and effective programs that improve treatment, prevention, and public awareness.
- Helping communities develop local cardiovascular disease and stroke prevention programs.
- Public education forums, programs, or initiatives about the impact of heart disease and stroke on women's health.

Stroke Awareness

The Texas Legislature observed American Stroke Month in 2007 and 2009.

Notes

1. The information provided is current as of July 2010.
2. Texas ranked 31st of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site.
3. The Joint Commission.
4. CDC National Heart Disease and Stroke Prevention Program: Texas.
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

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State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	4 ²
Age-adjusted Death Rate per 100,000 Population (18+)	45.4 ²
Joint Commission–certified Primary Stroke Centers	5 ³
CDC Heart Disease and Stroke Prevention Program Status	Basic Implementation ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Task Force

The Utah Stroke Task Force coordinates stroke systems of care in the state. The task force conducted a [survey](#) in 2007 about hospital treatment protocols for stroke and found:

- Wide variation in the facilities, treatment protocols, and use of tPA (the preferred medical treatment for ischemic stroke), particularly between urban and rural hospitals.
- Some hospitals had developed informal inter-hospital transfer agreements.
- Most hospitals did not track stroke care or have provisions to improve stroke care.

Stroke Surveillance

In 2007, the Utah Heart Disease and Stroke Prevention (HDSP) Program issued *The Impact of Heart Disease and Stroke in Utah 2007*, which found that eight Utah hospitals track stroke cases, treatments, and outcomes in a registry as recommended in the American Heart Association/American Stroke Association's Get With The Guidelines program.

Emergency Medical Services

A [2007 survey](#) by the Utah HDSP Program found that about two-thirds of emergency medical services providers would try to take a suspected patient to a primary stroke center but that only 15 percent would bypass a closer hospital to do it.

Telemedicine

The Utah Health Sciences Center offers a telestroke program to provide telemedicine to rural hospitals in the state.

Notes

1. The information provided is current as of July 2010.
2. Utah ranked 4th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site.
3. The Joint Commission.
4. CDC National Heart Disease and Stroke Prevention Program: Utah.
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Vermont

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	8 ²
Age-adjusted Death Rate per 100,000 Population (18+)	50.1 ²
Joint Commission–certified Primary Stroke Centers	1 ³
CDC Heart Disease and Stroke Prevention Program Status	Not funded ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Healthy Lifestyles

In 2008, the Vermont Legislature established a [Fitness and Health Advisory Council](#) to advise the commissioner of health on developing, implementing, and coordinating activities to increase physical activity, improve nutrition, and reduce overweight and obesity.

Stroke Education

In 2008, the Vermont Department of Health used federal funding to start a pilot project with five regional public health specialists. The project's goal was to disseminate stroke awareness materials and offer presentations to the public about stroke symptoms. In another campaign, regional public health specialists distributed cards listing stroke signs and symptoms from the "Give Me 5: Five Signs You're Having a Stroke" campaign of the Stroke Collaborative.

Stroke Surveillance

The Vermont [Behavioral Risk Factor Surveillance System](#) added several questions to its state survey related to stroke care, which will be used to plan, support, and evaluate stroke care programs.

Notes

1. The information provided is current as of July 2010.
2. Vermont ranked 8th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. [CDC National Heart Disease and Stroke Prevention Program](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

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Virginia

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	33 ²
Age-adjusted Death Rate per 100,000 Population (18+)	65.7 ²
Joint Commission–certified Primary Stroke Centers	25 ³
CDC Heart Disease and Stroke Prevention Program Status	Basic Implementation ⁴

Enacted State Primary Stroke Center Legislation

The Virginia General Assembly passed [House Bill 479](#) in 2008 to authorize the State Board of Health to create a triage plan that would include a provision to designate primary stroke centers through certification by The Joint Commission or a process consistent with the Brain Attack Coalition. The [State Stroke Triage Plan](#), approved by the State Board of Health in April 2010, recognizes hospitals with Joint Commission certification as designated primary stroke centers. The plan is also designed to:

- Promote quick access to appropriate care for stroke patients.
- Provide a strategy for regularly updating information on resources for stroke care.
- Propose criteria for stroke triage and transfer.
- Accommodate geographic variations and offer linkages between resources of varying capability for stroke care, including primary stroke centers certified by The Joint Commission.

The plan is a component of Virginia’s Emergency Medical Services (EMS) Plan. A 2009 amendment addresses care for prisoners in the care of the Department of Criminal Justice Services that have cardiac or stroke events.

Related State Policy and Initiatives⁵

Joint Commission on Health Care

In 2007, [House Joint Resolution 635](#) stipulated that Virginia’s Joint Commission on Health Care should study stroke prevention and care across the state. Although the resolution did not pass in Virginia’s General Assembly, the Commission chose to conduct the study and convened a workgroup that:

- Developed strategies and policy recommendations for facilitating stroke prevention and care.
- Worked with health and medical professionals from geographically and demographically diverse areas who specialize in the care and treatment of stroke.
- Addressed barriers to optimal stroke care.

The Commission also recommended:

- That a standing Stroke Systems Task Force address improvement in Virginia's stroke systems.
- That all hospitals establish a protocol for the rapid evaluation and admission or transfer of stroke patients.
- That those who have suffered a stroke have an option for care coordination service payments.
- That acute stroke patients receive an expedited Medicaid determination review.

The recommendations of the workgroup directly contributed to the passage of the *State Stroke Triage Plan* legislation in the Virginia General Assembly in 2008.

Brain Injury Definition

In 2005, the Virginia General Assembly passed a bill to include strokes under the definition of brain injury in the Medicaid Brain Injury Waiver.

Notes

1. The information provided is current as of July 2010.
2. Virginia ranked 33rd of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Virginia](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

Washington

PRIMARY STROKE CENTER POLICY

WVA

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	22 ²
Age-adjusted Death Rate per 100,000 Population (18+)	61.3 ²
Joint Commission–certified Primary Stroke Centers	16 ³
CDC Heart Disease and Stroke Prevention Program Status	Basic Implementation ⁴

Enacted State Primary Stroke Center Legislation

Following the findings of the Emergency Cardiac and Stroke Work Group of the Governor’s Emergency Medical Services (EMS) and Trauma Care Steering Committee, the Washington State Legislature passed [House Bill 2396](#) in 2010. The bill encourages hospitals to voluntarily self-identify which level of cardiac and stroke services the facility provides. A hospital can be given status as a primary stroke center if it has received certification from The Joint Commission or other national certifying organization and follows protocols and procedures recommended by the work group.

Related State Policy and Initiatives⁵

Stroke Partnerships

The Washington State Heart Disease and Stroke Prevention (HDSP) Program led the CDC-funded [Northwest Regional Stroke Network](#), which included HDSP Programs in Alaska, Idaho, Montana, and Oregon. The network’s mission was to facilitate, through collaboration, equal access to high-quality stroke care throughout the Northwest. Network funding ended in June 2010.

Stroke Standards

The Washington State Department of Health (DOH) drafted and implemented uniform pre-hospital protocols and transport procedures for stroke patients. The Department also drafted designation standards for stroke and cardiac centers.

Stroke Report

In 2008, DOH released *Emergency Cardiac and Stroke Care in Washington*, which describes the scarcity of resources, such as cardiology and neurology specialists and paramedics, available in rural areas to respond to and treat heart attack and stroke. In addition to recommending a statewide system for stroke care, the report recommended:

- Educating the public about heart attack and stroke symptoms and the importance of calling 9-1-1.
- Applying uniform state standards based on the American Heart Association/American Stroke Association’s guidelines for heart attack and stroke care.



- Creating a statewide system to track performance and quality of care.
- Verifying that hospitals meet state standards for cardiac and stroke facilities.
- Using telehealth to enable clinicians to diagnose and treat patients in remote areas through teleconferencing, videoconferencing, and digital imaging.

Notes

1. The information provided is current as of July 2010.
2. Washington ranked 22nd of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [Washington](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

West Virginia

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	27 ²
Age-adjusted Death Rate per 100,000 Population (18+)	64.5 ²
Joint Commission–certified Primary Stroke Centers	3 ³
CDC Heart Disease and Stroke Prevention Program Status	Basic Implementation ⁴

Enacted State Primary Stroke Center Legislation

In 2010, [Senate Bill 581](#) was pending in the West Virginia Legislature. The bill proposes the Primary Stroke Center Designation Act, which would give the secretary of the West Virginia Department of Health the authority to designate a hospital with Joint Commission or comparable certification as a primary stroke center.

Related State Policy and Initiatives⁵

Minority Health

In 2004, West Virginia established an [Office of Minority Health](#) to address, among other health disparities, the greater risk for stroke and heart disease among African Americans.

Stroke Burden

In 2004, the West Virginia Health Statistics Center developed a comprehensive report examining cerebrovascular disease, [Understanding Stroke in West Virginia](#).

Obesity Prevention

In 2002, the West Virginia Legislature commissioned the Joint Committee on Governing and Finance to [conduct a study](#) of the obesity epidemic in West Virginia, acknowledging that obesity increases the risk of cardiovascular diseases and stroke. Two years later, the committee conducted a [study of childhood obesity](#), recognizing that habits leading to obesity increase the risk for stroke.

Stroke Awareness

In 2006, the West Virginia Legislature adopted resolutions recognizing the high incidence of stroke for women and designated February 3, 2006, as Go Red for Women Day.

Notes

1. The information provided is current as of July 2010.
2. West Virginia ranked 27th of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. CDC National Heart Disease and Stroke Prevention Program: [West Virginia](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

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Wisconsin

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	32 ²
Age-adjusted Death Rate per 100,000 Population (18+)	65.5 ²
Joint Commission–certified Primary Stroke Centers	26 ³
CDC Heart Disease and Stroke Prevention Program Status	Capacity Building ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Partnerships

The Wisconsin Heart Disease and Stroke Prevention (HDSP) Program participated in the Great Lakes Regional Stroke Network, led by the Illinois HDSP Program and including HDSP Programs in Michigan, Minnesota, and Ohio as well as the Indiana Department of Health. CDC funded the network to increase stroke awareness, prevention, and control activities within and across the region. Network funding ended in June 2010.

Stroke Recurrence

In 2007, Wisconsin received CDC funding to implement a public health demonstration project addressing prevention of heart disease, stroke recurrence, and complications from stroke.

Stroke Awareness

The Wisconsin State Legislature recognized May as Stroke Awareness Month and expressed their support for the American Heart Association/American Stroke Association's Power to End Stroke campaign in 2007. The Legislature also proclaimed May 2, 2009, as Pediatric Stroke Awareness Day.

Notes

1. The information provided is current as of July 2010.
2. Wisconsin ranked 32nd of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site.
3. The Joint Commission.
4. CDC National Heart Disease and Stroke Prevention Program: Wisconsin.
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

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Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
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Wyoming

PRIMARY STROKE CENTER POLICY

State at a Glance¹

National Ranking in Stroke Mortality (2006) 1 = lowest mortality rate, 51 = highest mortality rate	21 ²
Age-adjusted Death Rate per 100,000 Population (18+)	61 ²
Joint Commission–certified Primary Stroke Centers	1 ³
CDC Heart Disease and Stroke Prevention Program Status	Not funded ⁴

Enacted State Primary Stroke Center Legislation

None.

Related State Policy and Initiatives⁵

Stroke Prevention Plan

The Wyoming Department of Health issued a strategic plan to improve stroke prevention and treatment called the *Wyoming State Plan for Heart Disease and Stroke Prevention for 2008–2010*. The plan notes that there is no statute requiring emergency medical services providers to have specific training on stroke recognition or treatment. The report calls for statewide protocols for the treatment of stroke that will include (among other tools and suggestions) the use of Get With The Guidelines in hospitals.

Notes

1. The information provided is current as of July 2010.
2. Wyoming ranked 21st of the 50 states and the District of Columbia for age-adjusted stroke mortality in 2006. Rates are for adults (18+) per 100,000 population. [Division for Heart Disease and Stroke Prevention: Data Trends & Maps Web Site](#).
3. [The Joint Commission](#).
4. [CDC National Heart Disease and Stroke Prevention Program](#).
5. Initiatives mentioned here are meant to provide some context for the policy climate for stroke in the state. They do not constitute a comprehensive list of stroke-related initiatives.

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention



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