

State of Stroke in Michigan

Michigan Stroke Conference 2010: Bridging the Gaps

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Stroke in the United States

- Each year about 795,000 people experience a new or recurrent stroke.
 - ~ 610,000 of these are first attacks
 - ~ 185,000 are recurrent attacks
- Stroke remains the 3rd leading cause of death and the leading cause of long-term disability
- Every 40 seconds someone experiences a stroke

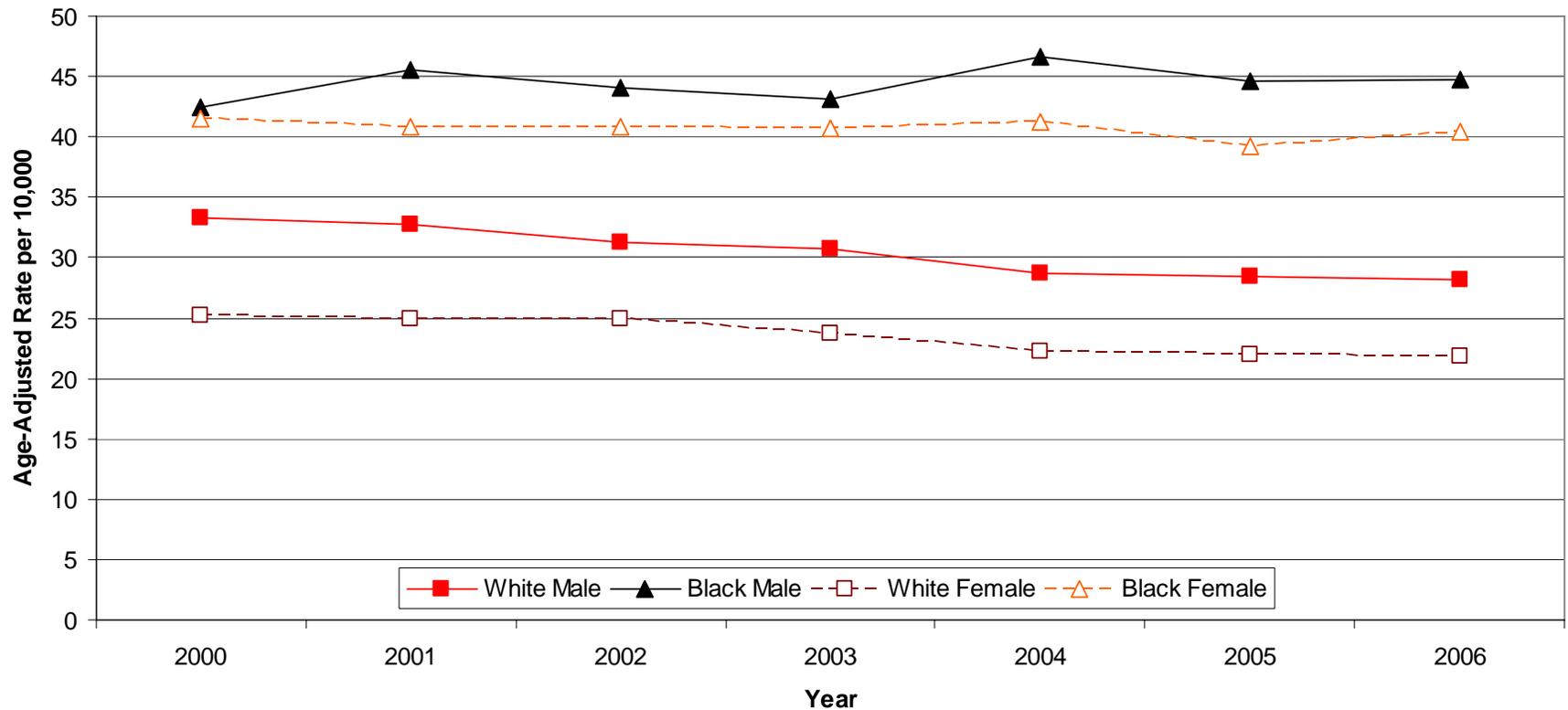
Stroke In Michigan

- Over 3% (~ 180,000) of Michigan adults age 35 years and older reported that a physician told them they had a stroke
- The prevalence of stroke increased with age from 1.81% among adults 35 to 64 years of age to 8.7% in those 65 and older
- Stroke is more prevalent in blacks (6.8%) than whites (2.9%) or other races (3.9%)
- A higher percentage of females reported having had a stroke than males, 3.8% and 3.1% respectively

Michigan Stroke Hospitalizations

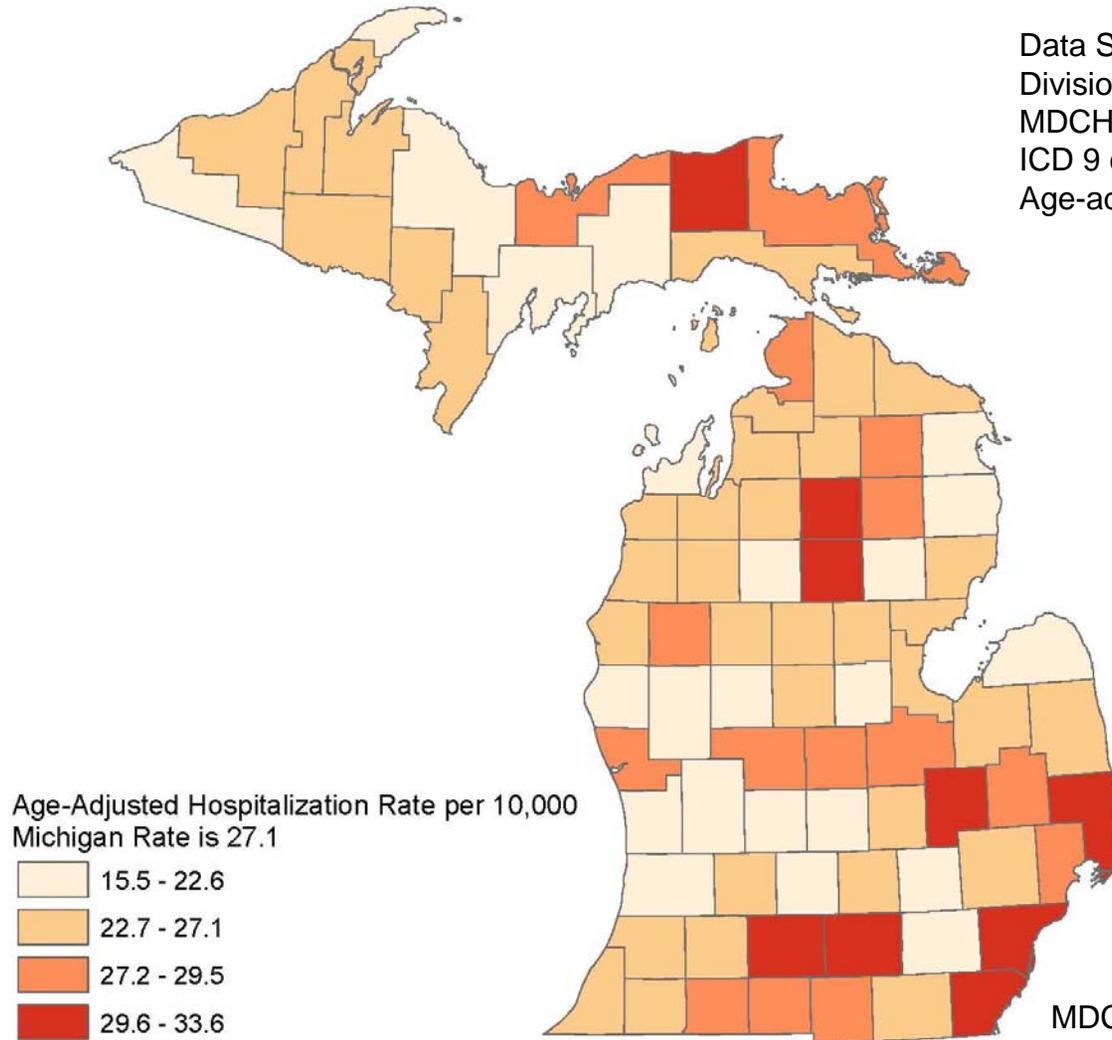
- 28,207 hospital discharges in 2006
- 26.7 per 10,000 people (age-adjusted)
- Discharge status
 - 6% were deaths (>1,500 people)
 - 10% to inpatient rehabilitation facility
 - 15% to skilled nursing facility
 - 12% transferred home under home care service
 - **Almost ½ discharged home/self care**

Age-adjusted stroke hospitalization rates by race and gender, Michigan, 2000 to 2006



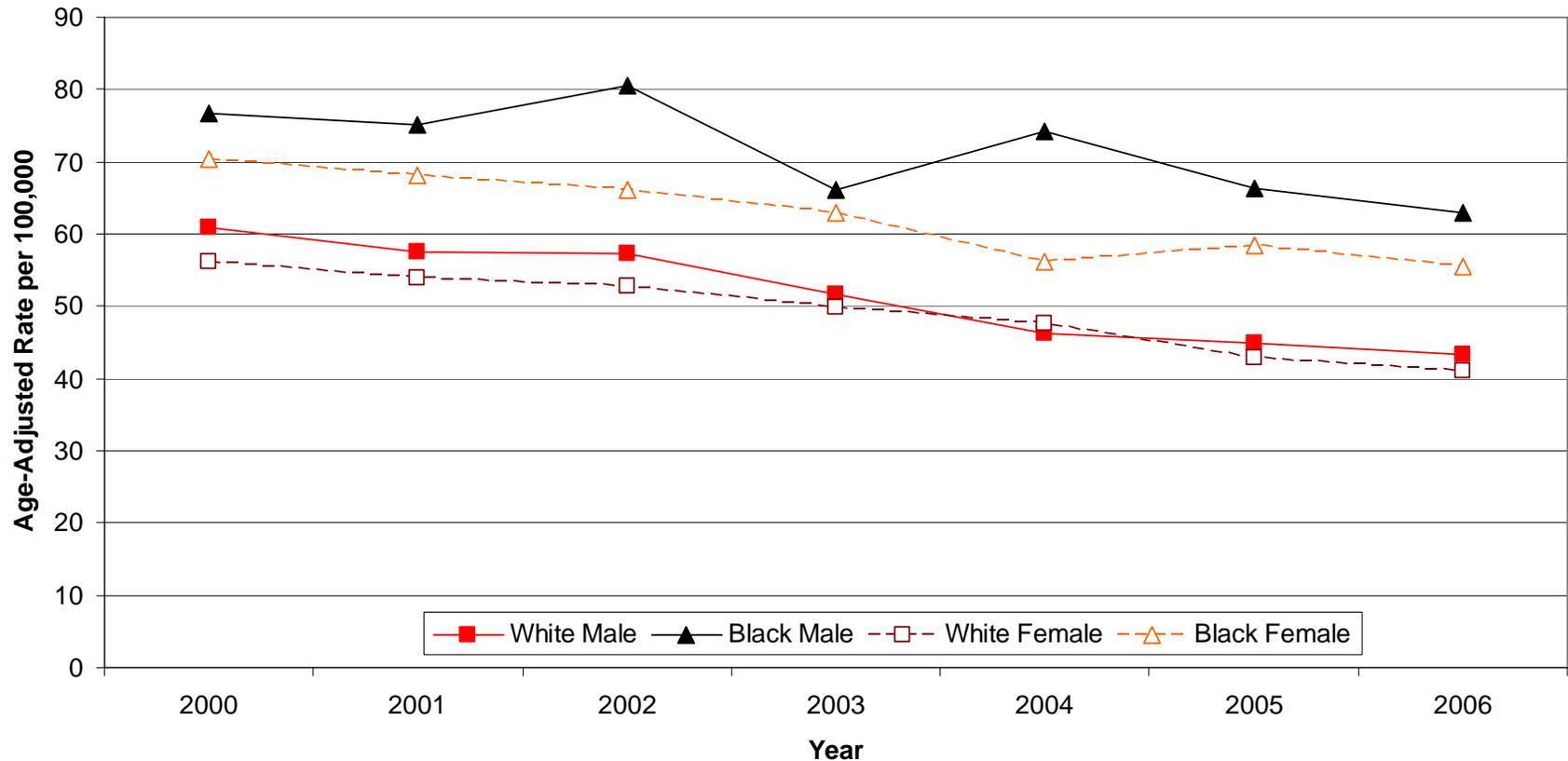
Source: Michigan Resident Inpatient Files, Division for Vital Records and Health Statistics, MDCH.
ICD 9 codes 430-434, 436-438.
Age-adjusted to the 2000 standard U.S. population.

Age-adjusted five-year hospitalization rates for stroke by county, 2000 to 2006



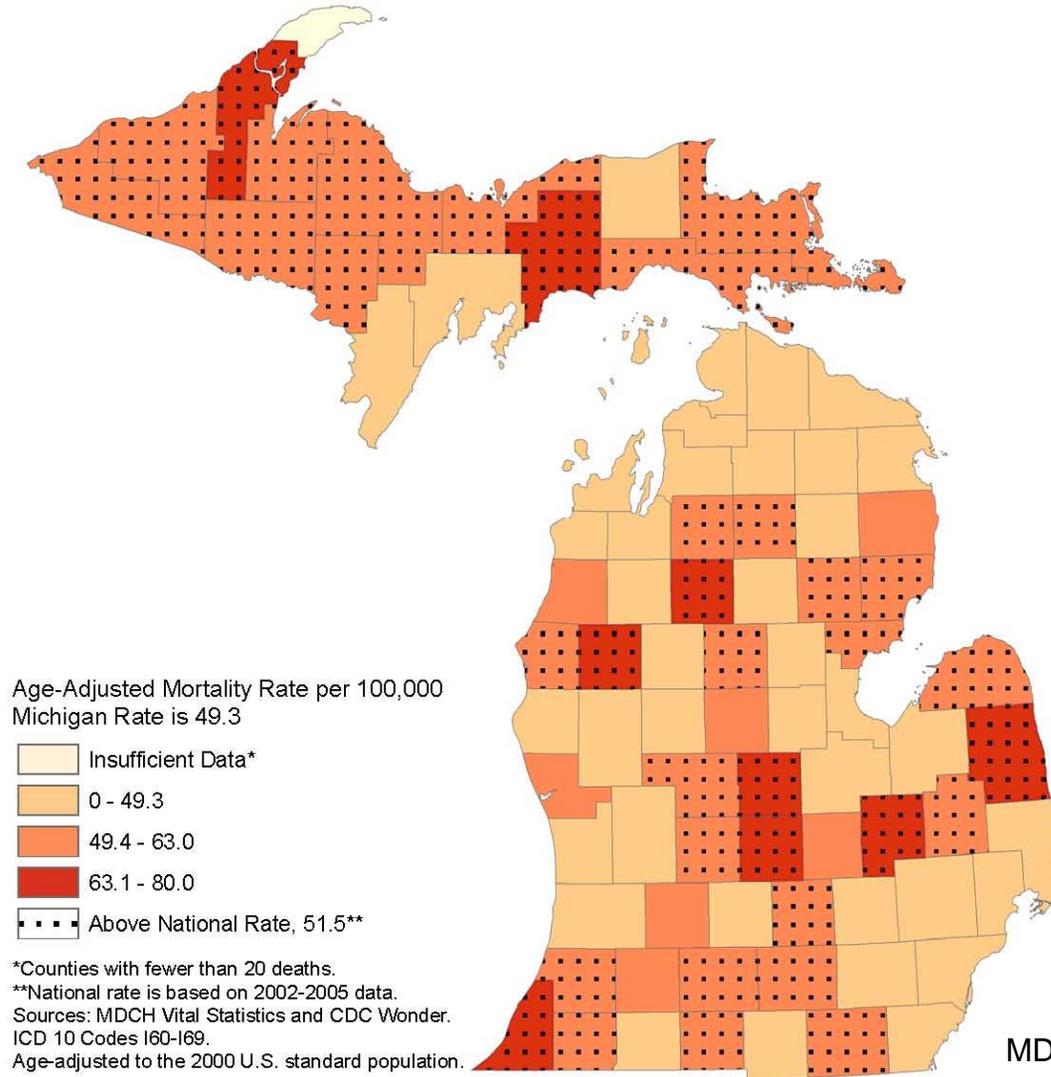
Data Source: Michigan Resident Inpatient Files,
Division for Vital Records and Health Statistics,
MDCH.
ICD 9 codes 430-434, 436-438.
Age-adjusted to the 2000 standard U.S. population.

Age-adjusted stroke mortality rates by race and gender, Michigan, 2000 to 2006



Source: Michigan Resident Inpatient Files, Division for Vital Records and Health Statistics, MDCH.
ICD 9 codes 430-434, 436-438.
Age-adjusted to the 2000 standard U.S. population.

Age-adjusted five-year mortality rates for stroke by county, 2000 to 2006



Recognition of Stroke Warning Signs and Taking Emergency Action

- Michigan survey data show that more of the public is recognizing stroke symptoms*
 - But only 27.6% of adults had adequate knowledge of stroke symptoms (defined as reporting 3 warning signs of stroke)**
- Even with improvement in recognition of stroke, too many patients are still not getting into emergency care right away
 - Only 14% of adults reported they would call 911 for the 3 warning signs of stroke.**

*2009 Michigan BRFS

**Fussman, Chris et al. Stroke. 2010;41:00-00



Initiatives to Address the Burden of Stroke

Preventing and Controlling Risk Factors is Key

- Reducing the burden of obesity
- Preventing and controlling diabetes
- Detecting and controlling high blood pressure
- Promoting a healthy lifestyle including regular physical activity, healthy eating, and not smoking

Promoting environments that encourage healthy lifestyles such the recent smoke-free Michigan legislation.

MICHIGAN

STROKE INITIATIVE

Leading the way for stroke prevention and care

Welcome to the Online Home of the Michigan Stroke Initiative

Stroke is still the third most common cause of death in Michigan. The Michigan Stroke Initiative (MSI) is a coalition of experts in stroke who were convened to address the burden of stroke in Michigan and to recommend strategies for reducing the burden. Since its inception in 1997, MSI has accomplished a great deal but much remains to be done.

This website supports the activities of the MSI. Here's what you'll find:

- More [About the Michigan Stroke Initiative](#)
- The [MSI Report](#) and Recommendations
- Information on the [Burden of Stroke in Michigan](#)
- Additional [Resources](#) that support stroke prevention and care initiatives
- A listing of [Primary Stroke Centers](#) in Michigan
- Current [Projects](#) initiated with MSI collaboration and support to help reduce stroke burden

If you would like more information about the Michigan Stroke Initiative, including past and current activities and projects, please [contact us](#).

MSI Home

About MSI

MSI Report

Burden of Stroke in
Michigan

Resources

Primary Stroke Centers

Projects

Contact Us

Chain of Survival

- Initiatives targeting all aspects of the chain of survival:



Patient/Public
Awareness

EMS

Emergency Room
and Hospital

Treatment

Patient and Public Awareness Campaigns

Innovative Media Messaging



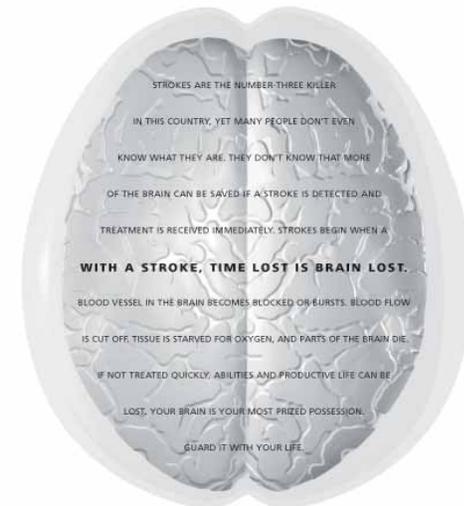
Michigan Department of Community Health (MDCH) May is American Stroke Month. This month, make a commitment to learn the warning signs of stroke, such as numbness, difficulty speaking, loss of vision or severe headache with no known cause. Log onto www.michigan.gov/cardiovascular for more information.

MDCH Cardiovascular Redirect
www.michigan.gov

May 17 at 10:38am · Comment · Like

Michael E. Miller, GERALYN Lasher and

Partnering with the American Stroke Association on PSA Messages



If you suddenly have or see any of these symptoms, call 9-1-1 immediately: Numbness or weakness of the face, arm or leg, especially on one side of the body • Confusion, trouble speaking or understanding • Difficulty seeing in one or both eyes • Trouble walking, dizziness, loss of balance or coordination • Severe headache with no known cause

Learn more at StrokeAssociation.org or 1-888-4-STROKE.

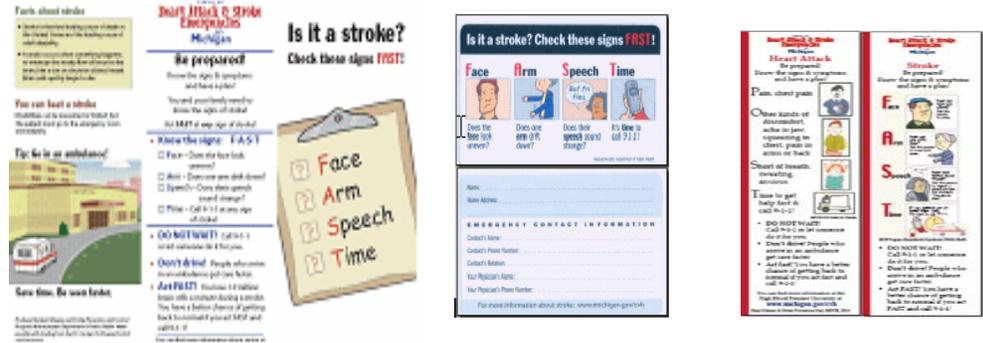


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Patient and Public Awareness Campaigns (continued)

- FAST Campaign materials and Educational Bookmarks Disseminated
- At-risk population programs such as faith-based initiatives, community screening form templates, etc.



These materials and other resources can be downloaded or requested at www.michigan.gov/hbpu

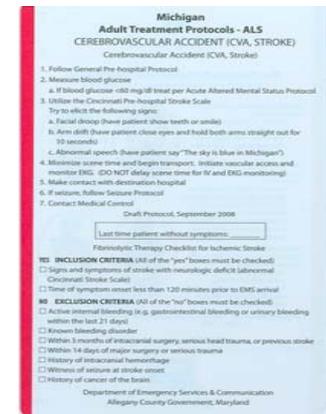
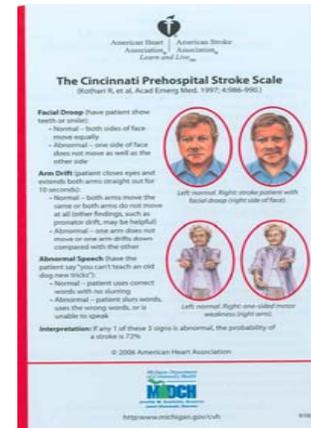
Collaboration With EMS

Professional Education

- University of Miami Advanced Stroke Life Support
 - Stroke curriculum designed for EMS, used in several states
 - Hands on 8 hour workshop
 - 5 Workshops planned/conducted since 2008
 - A total of 76 EMS Instructor Educators trained in a train-the-trainer program
 - Over 300 EMS providers have been trained

EMS Collaboration Continued..

- Developed pocket card tools for EMS describing the Cincinnati Stroke Scale, statewide stroke protocol, reminder to identify last seen normal and a sample thrombolytic checklist.
- Offered educational programs and workshops such as a recent conference, “Regionalization of Emergency Care: It’s Not a New Idea.”
- Collaborating with EMS to support a regionalized, coordinated system of emergency care in Michigan.





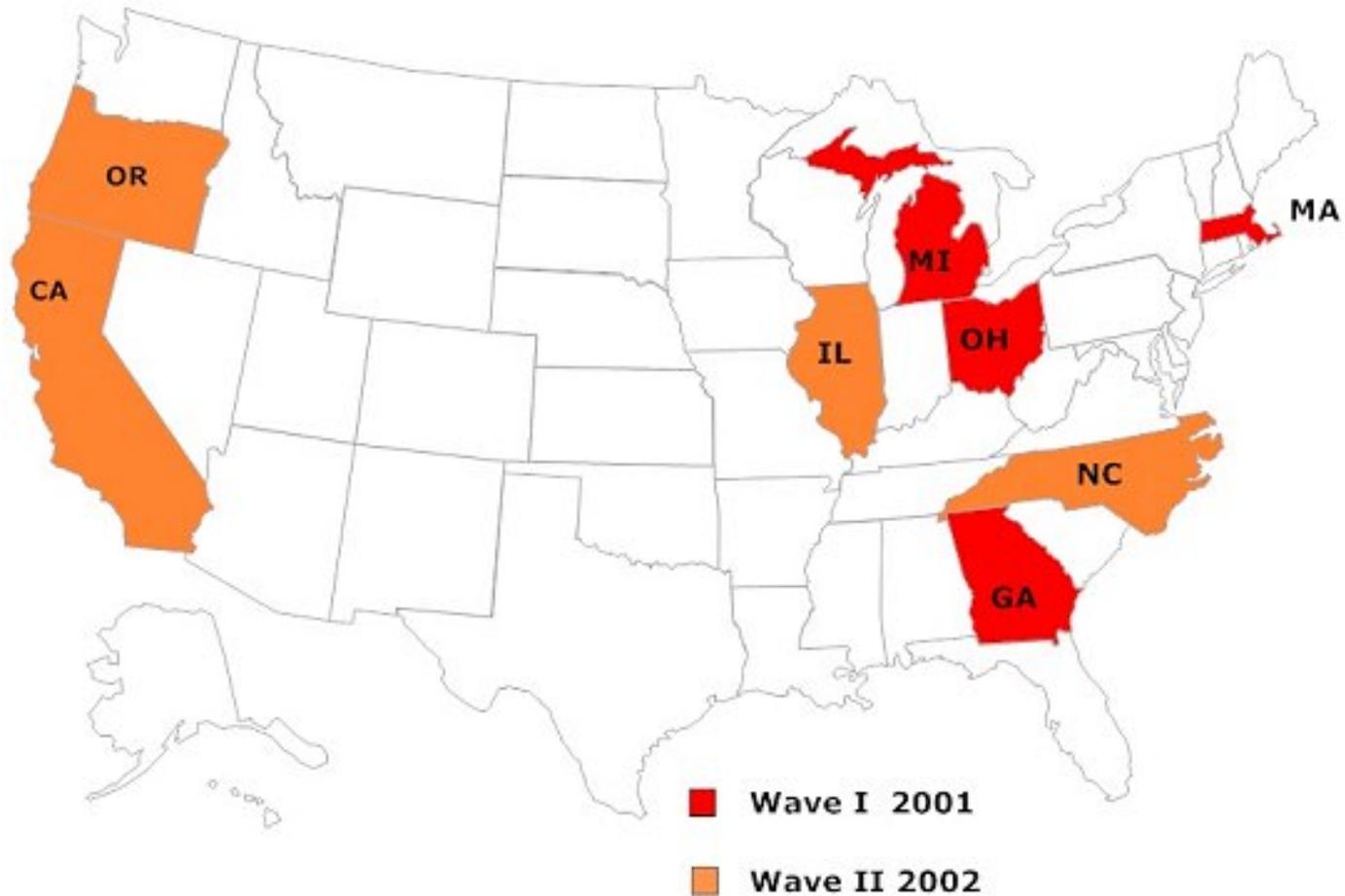
Emergency Room, Hospital and Stroke Treatment Initiatives

Stroke Registry and Quality Improvement Project

Paul Coverdell National Acute Stroke Registry

- Michigan was one of first “wave” of participating states 2001-2004
- Lessons learned are applied to registry expansion, 2007-2012
- Registry also seeks to improve acute stroke care and to:
 - ✓ Measure and track the quality of care for acute stroke patients
 - ✓ Decrease rate of premature death and disability through secondary prevention
 - ✓ Increase public awareness
 - ✓ Reduce disparities in acute stroke care

Coverdell Stroke Registry Prototypes



Note: The states colored red started participation in the Paul Coverdell Stroke Registry prototypes in September 2001. The states colored orange started participation in Wave II in May 2002

Wave 1 Findings

Acute Stroke Care in the US

Results from Four Pilot Prototypes of the Paul Coverdell National Acute Stroke Registry

The Paul Coverdell Prototype Registries Writing Group*

Background and Purpose—The Paul Coverdell National Acute Stroke Registry is being developed to improve the quality of acute stroke care. This article describes key features of acute stroke care from 4 prototype registries in Georgia (Ga), Massachusetts (Mass), Michigan (Mich), and Ohio.

Methods—Each prototype developed its own sampling scheme to obtain a representative sample of hospitals. Acute stroke admissions were identified using prospective (Mass, Mich) or retrospective (Ga, Ohio) methods. All prototypes used a common set of case definitions and data elements. Weighted site-specific frequencies were generated for each outcome.

Results—A total of 6867 admissions from 98 hospitals were included; the majority were ischemic strokes (range, 52% to 70%) with transient ischemic attack and intracerebral hemorrhage comprising the bulk of the remainder. Between 19% and 26% of admissions were younger than age 60 years, and between 52% and 58% were female. Black subjects varied from 7.1% (Mich) to 30.6% (Ga). Between 20% and 25% of admissions arrived at the emergency department within 3 hours of onset. Treatment with recombinant tissue plasminogen activator (rtPA) was administered to between 3.0% (Ga) and 8.5% (Mass) of ischemic stroke admissions. Of 118 subjects treated with intravenous rtPA, <20% received it within 60 minutes of arrival. Compliance with secondary prevention practices was poorest for smoking cessation counseling and best for antithrombotics.

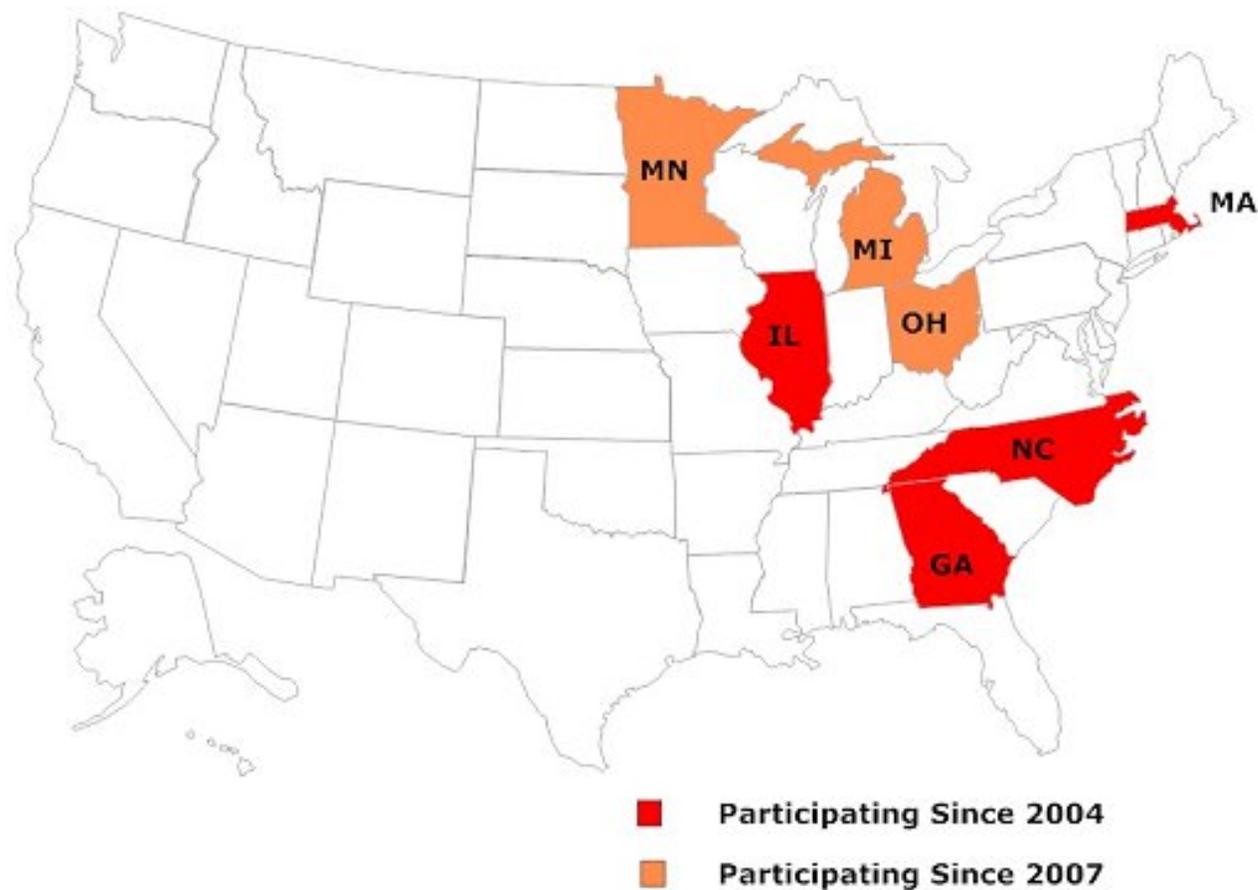
Conclusions—A minority of acute stroke patients are treated according to established guidelines. Quality improvement interventions, targeted primarily at the health care systems level, are needed to improve acute stroke care in the United States. (*Stroke*. 2005;36:1232-1240.)

Key Words: health care ■ quality of healthcare ■ registries ■ stroke, acute

American Stroke
Association
A Division of American Heart Association

- Large gaps existed between guidelines and actual hospital practices
- Conclusion: Intensive QI efforts needed to close those gaps

Paul Coverdell National Acute Registry States, 2007



Michigan Stroke Registry and Quality Improvement Project 2007-2012

- 36 participating hospitals, providing representative data on stroke care in Michigan
- Collecting and reporting data on ischemic strokes, transient ischemic attacks, and hemorrhagic strokes
- Collaborative quality improvement project focusing on the Consensus Acute Stroke Performance Measures supported by:
 - CDC's Paul Coverdell National Acute Stroke Registry
 - The Joint Commission
 - American Heart Association/American Stroke Association