

# The Paul Coverdell National Acute Stroke Registry Comes to Wisconsin

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The adage “time is muscle” is a familiar one within the medical community and to many patients as it pertains to a sudden cardiac events. However, the phrase “time is brain” is less recognized among the public, and it ought to be. As the third-leading cause of death in the United States, stroke causes staggering morbidity. More than 700,000 Americans per year have a stroke, with 15%-30% of those affected becoming permanently disabled.

## Background

In the year 2000 Senator Paul Coverdell of Georgia suffered a fatal stroke. The following year Congress assigned the Centers for Disease Control and Prevention (CDC) the task of creating statewide stroke registries named after Senator Coverdell. The Paul Coverdell National Acute Stroke Registry (PCNASR) was inaugurated. These registries were to focus on improving quality of care within the states that were allocated to the project.

Initially, the CDC worked with stroke spe-

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cialists across the United States to ascertain where the gaps in stroke care existed. As in other clinical areas, there were many gaps between recommended best practices and actual care being delivered across the care continuum. To begin closing these quality gaps the CDC, in June 2004, awarded grants to 4 states: Georgia, Illinois, Massachusetts, and North Carolina. The state health departments in these states formed lasting partnerships with the CDC. Furthermore, collaboration with The Joint Commission and the American Heart Association/American Stroke Association (AHA/ASA) took place. These affiliations allowed for the following 10 consensus measures to be developed:

1. STK-1 Venous Thromboembolism (VTE) Prophylaxis—Patients with an ischemic stroke or a hemorrhagic stroke who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission.
2. STK-2 Discharged on Antithrombotic Therapy—Patients with an ischemic stroke prescribed antithrombotic therapy at discharge.
3. STK-3 Patients with Atrial Fibrillation/Flutter Receiving Anticoagulation Therapy—Patients with an ischemic stroke with atrial fibrillation or flutter discharged on anticoagulation therapy.
4. STK-4 Thrombolytic Therapy—Acute ischemic stroke patients who arrive at the hospital within 120 minutes (2 hours) of time last known well and for whom IV tPA was initiated at this hospital within 180 minutes (3 hours) of time last known well.

5. STK-5 Antithrombotic Therapy by End of Hospital Day 2—Patients with ischemic stroke who receive antithrombotic therapy by the end of hospital day 2.
6. STK-6 Discharged on Statin Medication—Ischemic stroke patients with LDL  $\geq 100$ , or LDL not measured, or, who were on cholesterol-reducing therapy prior to hospitalization are discharged on statin medication.
7. STK-7 Dysphagia Screening—Patients with ischemic or hemorrhagic stroke who undergo screening for dysphagia with an evidence-based bedside testing protocol before being given any food, fluids, or medication by mouth.
8. STK-8 Stroke Education—Patients with ischemic or hemorrhagic stroke or their caregivers who were given education and/or educational materials during the hospital stay addressing all of the following: risk factors for stroke, warning signs for stroke, activation of emergency medical system, need for follow-up after discharge, and medications prescribed at discharge.
9. STK-9 Smoking Cessation Counseling—Patients with ischemic or hemorrhagic stroke with a history of smoking cigarettes, who are, or whose caregivers are, given smoking cessation advice or counseling during hospital stay. For the purposes of this measure, a smoker is defined as someone who has smoked cigarettes anytime during the year prior to hospital arrival.
10. STK-10 Assessed for Rehabilitation—Patients with an ischemic stroke or hemorrhagic stroke who were assessed for rehabilitation services.

Upon hospital-based implementation and evaluation of these guidelines, statewide improvements in care were noted. At the end of the initial 3-year period, 180 hospitals were registered in the program and over 45,000 inpatients benefited. In July 2007, the CDC awarded funds to additional states, and in September 2012, other states including Wisconsin were added. There currently are 11 states participating in PCNASR.

### **Mission, Goals, and Objectives**

The mission of the PCNASR is to:

1. Measure, track, and improve the quality of care for acute stroke patients.
2. Increase public awareness of stroke treatment and prevention.
3. Through secondary prevention, decrease the rate of premature death and disability from acute stroke.
4. Reduce disparities in acute stroke care by providing underserved populations with better access to high-quality care.

Wisconsin has developed an integrated col-

laborative approach to meet this mission with resources and expertise from MetaStar along with the CDC, the Department of Health Services, AHA/ASA, the Wisconsin Stroke Committee (WSC), Primary Stroke Centers and Emergency Medical Services (EMS) in Wisconsin. Wisconsin's goals are to:

1. Reduce death and disability due to heart disease and stroke and eliminate disparities in care.
2. Increase the quality of EMS care for possible stroke patients.
3. Improve the transition of care from EMS to hospital emergency department staff.
4. Improve the quality of acute and sub-acute hospital stroke care through adherence to established guidelines and endorsed quality measures.

There are multiple plans to assist hospital teams in achieving these goals. First-year aims are to have 20 hospitals participating in the PCNASR; at this writing 15 have shown interest. The participating facilities will enter

data into AHA/ASA's "Get with the Guidelines" secure data network. These data then can be analyzed for quality improvement initiatives. The WSC, which encompasses caregivers from the stroke continuum of care, will develop the Wisconsin Stroke Plan to further statewide stroke initiatives. Partnerships with EMS will be established: the Wisconsin Ambulance Run Data System will be utilized to analyze data, which will be employed to enhance EMS systems. Participating hospitals will develop and implement quality improvement strategies. Statewide awareness initiatives of blood pressure control will occur in subsequent years.

### **Opportunity**

Wisconsin has a remarkable opportunity to enhance the best practices related to stroke across the care-continuum for residents. The collaboration and efforts of experts in their fields from multiple organizations throughout the state will ensure the success of the Coverdell program.

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