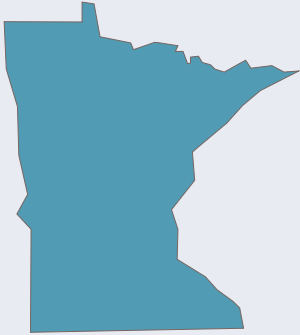


# Minnesota | RECIPIENT PROFILE (2019-2020)

The Minnesota Department of Health (MDH) is a state recipient of the Centers for Disease Control and Prevention (CDC)'s Paul Coverdell National Acute Stroke Program, which aims to improve the quality of stroke care and stroke outcomes. This profile summarizes program activities and outcomes for Program Year 5 (June 30, 2019-June 29, 2020).



## Select Implementation Partners

American Heart Association (AHA)  
Comprehensive Stroke Centers  
EMS Regional Groups  
HealthPartners  
Minnesota Ambulance Association  
MDH Office of Rural Health  
Primary Stroke Centers  
Stratis Health  
Minnesota Stroke Association

## State Prevalence of Stroke

2.6% of adults aged 18 and older report having had a stroke  
(Source: Behavioral Risk Factor Surveillance System, 2019)

## Award Amount

\$750,000 (Program Year 5 Award Amount)

## Complementary CDC-Funded Cardiovascular Disease Programs

DP18-1815 - Improving the Health of Americans through Prevention and Management of Diabetes and Heart Disease and Stroke

DP18-1816 - WISEWOMAN

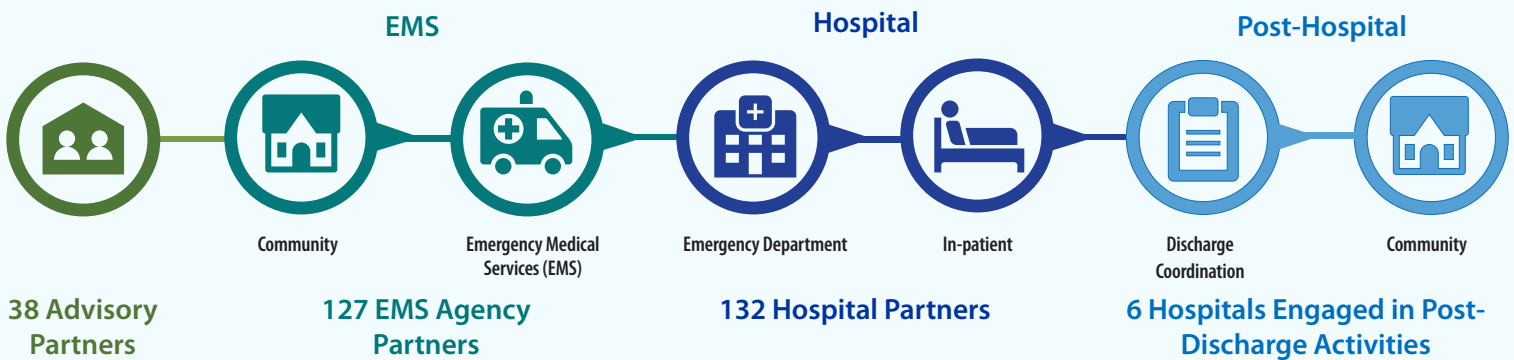
DP18-1817 - Innovative State and Local Public Health Strategies to Prevent and Manage Diabetes, Heart Disease, and Stroke

## Background of the MDH Stroke Program

Minnesota Department of Health (MDH) first received CDC funding in 2007 to implement the MDH Stroke Program. The MDH Stroke Program is a data-driven quality improvement (QI) project to monitor the quality of acute stroke care across clinical settings, including emergency medical services (EMS) care, hospital care, and care after hospital discharge. In 2015, CDC funded MDH through the Paul Coverdell National Acute Stroke Program (DP15-1514) to improve the quality of care for patients across the continuum of care. Program activities address stroke care from the time a patient has a stroke at home or in the community until after they are discharged and follow up with their doctor.

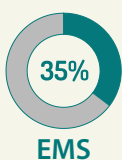


## Program Implementation

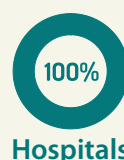


By the end of Program Year 5, MDH recruited 38 advisory organizations, 127 EMS agencies, and 132 hospitals. EMS agencies participated in MDH-led data collection and quality improvement activities and expanded statewide reach of the Coverdell program to transport and treat stroke patients. Hospital partners entered data in the state stroke registry and participated in MDH-led quality improvement activities. Of the 132 hospitals, 6 submitted post-discharge data.

## Program Reach



Patients with acute stroke in Minnesota who were transported by Minnesota Coverdell-participating EMS (2,474 patients transported)



Acute stroke patients in Minnesota admitted to Minnesota Coverdell-participating hospitals (13,393 patients admitted)

## EMS to Hospital Transitions of Care

### Key Activities

MDH invited hospital and EMS agency representatives to participate in a monthly webinar series that covered transitions of care topics. In addition, MDH developed a guidance document on interfacing with EMS agencies for hospital stroke coordinators. Through MDH's newly initiated EMS feedback project, three hospitals developed project plans in collaboration with the Stroke System Nurse Specialist.

### Performance Measures

EMS agencies called in **1,066** pre-alert notifications for suspected stroke patients in Program Year 5.\*



**69%** of EMS-hospital teams reported use of feedback from hospital to EMS in Program Year 5, allowing EMS to improve identification and treatment of acute stroke patients.



## Quality Improvement (QI)

### Key Activities

Through the Time Critical Response Initiative, MDH helped EMS agencies revise their stroke protocols to align with national guidelines and developed an e-learning course and toolkit for EMS providers. MDH provided technical assistance to hospitals applying for Acute Stroke Ready Hospital designation through consultations and site visits. MDH also hosted a monthly webinar series to reach partners and staff at hospitals and developed resources on topics such as performance improvement and increasing public awareness to build stroke coordinator capacity.

### Performance Measures

QI initiatives include workshops and trainings implemented by Coverdell recipients and their partners to improve implementation and focus of stroke care. These initiatives are implemented for EMS, hospital, and discharge hospital staff. MDH implemented **4** initiatives for EMS staff, **409** initiatives for hospital staff, and **8** initiatives for discharge hospital staff in Program Year 5.

## Data Linkages

### Key Activities

The Minnesota Stroke Portal, the state's web-based data collection application used for hospital data, was updated in 2019. In addition, EMS agencies submitted data to the Minnesota Statewide Ambulance Reporting data system, and the EMS transports that had a matching hospital stroke case were linked to the hospital records.

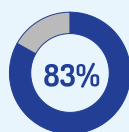
### Performance Measures

**82%** of EMS agencies (n=254) had data linked to in-hospital data elements in Program Year 5.<sup>a</sup>

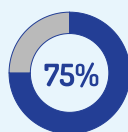


## Stroke Quality of Care Outcomes Among Minnesota-Participating Hospitals

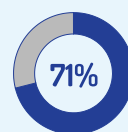
Activities contributed to performance in stroke quality of care as reflected in the following stroke outcomes:



of patients/caregivers received stroke education materials during their hospital stay



of acute ischemic stroke patients who were eligible for treatment received IV Alteplase, a clot busting drug, within 60 minutes of hospital arrival



of ischemic stroke patients received all available care for which they were eligible\*\*

For more information, please visit [https://www.cdc.gov/dhdsr/programs/stroke\\_registry.htm](https://www.cdc.gov/dhdsr/programs/stroke_registry.htm)

Data sources: Year 5 recipient-reported performance measure data, hospital and patient level data, evaluation reports, and annual performance reports

\*Advanced notification by EMS is under the condition of arrival by EMS. Percentage represents those stroke patients that were called in out of the total number that arrived via EMS.

\*\*Please see Overwyk, et. al., Defect-free care trends in the Paul Coverdell National Acute Stroke Program, 2008-2018, American Heart Journal for included measures.

<sup>a</sup>Performance measures are based on data submitted by Coverdell recipients. The total number of EMS agencies differ from the implementation figure on page 1 due to differences in recipient reporting mechanisms.