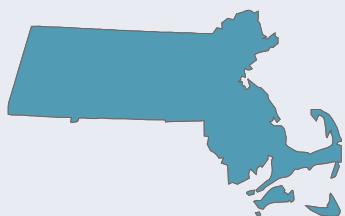


# Massachusetts | RECIPIENT PROFILE (2019-2020)

The Commonwealth of Massachusetts Department of Public Health 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 in Program Year 5 (June 30, 2019 - June 29, 2020).



## Select Implementation Partners

American Heart Association (AHA)  
Million Hearts®  
Community Organizations  
(e.g., Healthy Living Center for Excellence)  
Government Agencies  
(e.g., Office of Emergency Medical Services)

## State Prevalence of Stroke

3.2% of adults aged 18 and older report having had a stroke  
(Source: Massachusetts 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

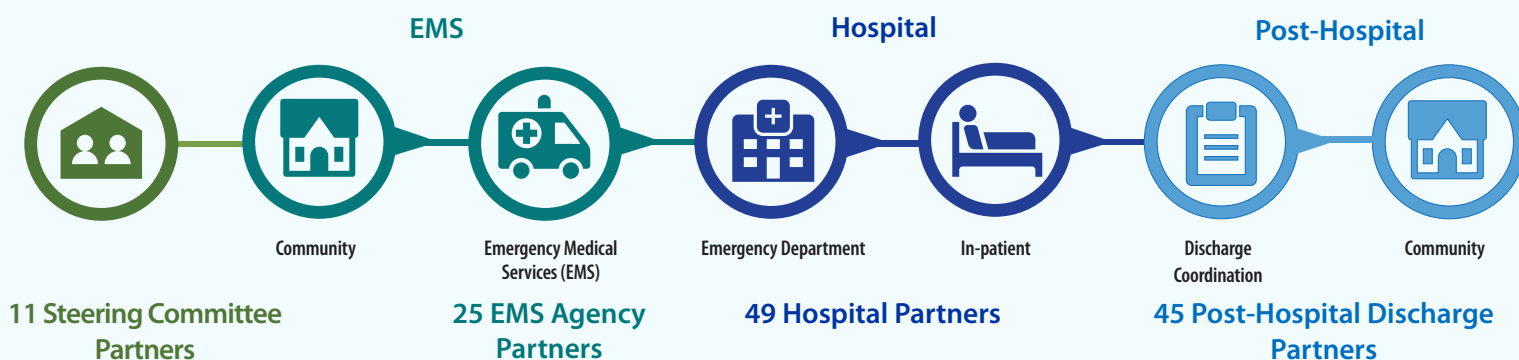
DP18-1817 - Innovative State and Local Public Health Strategies to Prevent and Manage Diabetes, Heart Disease, and Stroke

## Background of the Massachusetts Coverdell Program (MCP)

The Massachusetts Department of Public Health (MDPH) first received CDC funding in 2001 to implement the Massachusetts Coverdell Program (MCP). The MCP is a data-driven quality improvement project to monitor the quality of acute stroke care across clinical and community settings, including emergency medical services (EMS) care, hospital care, and care after hospital discharge. In 2015, CDC funded MDPH 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, MCP recruited 11 steering committee partners, 25 EMS agencies, 49 hospitals, and 45 post-hospital discharge providers (e.g., rehabilitation providers and skilled nursing facilities). EMS agencies participated in MCP-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 MCP-led quality improvement activities, such as online education modules through the Coverdell Education Portal. Post-discharge partners also provided aggregate quality of care data to MCP. MCP linked each of these partners through the establishment of Regional Stroke Systems of Care.

## Program Reach



EMS

Patients with acute stroke in Massachusetts who were transported by Massachusetts Coverdell-participating EMS (3,519 patients transported)



Hospitals

Acute stroke patients in Massachusetts admitted to Massachusetts Coverdell-participating hospitals (13,530 patients admitted)

## EMS to Hospital Transitions of Care

### Key Activities

MCP created Stroke Systems of Care teams that were led by a hospital stroke coordinator and included EMS agency partners. MCP supported these teams in their efforts to improve EMS to hospital transitions by holding learning sessions, conference calls, and regional meetings in which subject matter experts presented best practices and participating EMS and hospital staff engaged in peer-to-peer sharing.

### Performance Measures

EMS agencies called in **2,250** pre-alert notifications for suspected stroke patients in Program Year 5.\*



**86%** of EMS-hospital teams reported use of feedback from hospital to EMS in Program Year 5, allowing EMS to improve identification and treatment of stroke patients.



## Quality Improvement (QI)

### Key Activities

MCP facilitated a QI learning collaborative that included regional meetings for all hospital staff and bi-monthly conference calls with stroke coordinators. MCP provided participating hospitals annual Comparison Reports where performance on key stroke quality of care measures was compared to similar hospitals. MCP also supported hospitals in creating stroke protocols and workflows based on best-practice guidelines. Finally, MCP led a post-hospital collaborative with home care and inpatient rehab facilities to improve care and recovery after discharge.

### 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. MCP implemented **16** initiatives for EMS staff, **16** initiatives for hospital staff, and **10** initiatives for discharge hospital staff in Program Year 5.

## Data Linkages

### Key Activities

MCP developed and continued to expand methods for successfully linking EMS data from the Massachusetts Ambulance Trip Record Information System with hospital data from the Coverdell IQVIA stroke registry at the health department. MDPH worked with a large academic center to link outcome data to Coverdell IQVIA stroke registry data to monitor the quality of stroke care across the continuum of care.

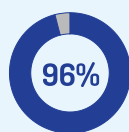
### Performance Measures

**100%** of EMS agencies (n=25) had data linked to in-hospital data in Program Year 5.

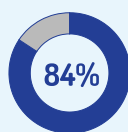


## Stroke Quality of Care Outcomes Among Massachusetts-participating Hospitals

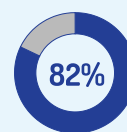
Activities contributed to performance in stroke quality of care as reflected in the following stroke outcomes:



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/dhdp/programs/stroke\\_registry.htm](https://www.cdc.gov/dhdp/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.